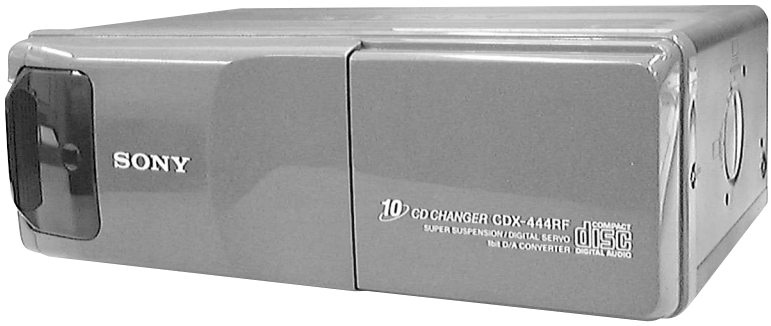
CDX-444RF

SERVICE MANUAL

Ver 1.3 2002.03

US Model
Canadian Model
AEP Model
UK Model
E Model



Model Name Using Similar Mechanism	CDX-434RF
CD Drive Mechanism Type	MG-251A-137
Optical Pick-up Name	KSS-720A

SPECIFICATIONS

CD changer (CDX-444RF)

System	Compact disc digital audio system
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 µW*

* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

Transmitting frequency	88.3 MHz/88.5 MHz/ 88.7 MHz/88.9 MHz/ 89.1 MHz/89.3 MHz/ 89.5 MHz/89.7 MHz/ 89.9 MHz (switchable)
Input/output terminals	Wired remote control (8 pin) RF signal (FM) output Power input (3 pin)
Current drain	800 mA (at playback) 800 mA (at disc loading/ejecting)
Operating temperature	–10°C to +55°C (14°F to 131°F)
Dimensions	Approx. 262 × 90 × 181.5 mm (10 3/8 × 3 5/8 × 7 1/4 in.) (w/h/d)
Mass	Approx. 2.1 kg (4 lb. 10 oz.)

Relay box

Input/output	Antenna input terminal Antenna output cord CD Changer input cord
Dimensions	Approx. 40 × 40 × 27 mm (1 5/8 × 1 5/8 × 1 1/8 in.) (w/h/d)
Mass	140 g (5 oz.)

Wired remote (RM-X82RF)

Dimensions	Approx. 122 × 36.5 × 15.5 mm (4 7/8 × 1 7/16 × 5/8 in.) (w/h/d)
Mass	Approx. 255 g (9 oz.)

Supplied accessories

Disc magazine (1)
Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

COMPACT DISC CHANGER SYSTEM

9-870-222-14
2002C0500-1
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e Vehicle Company
Published by Sony Engineering Corporation

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SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

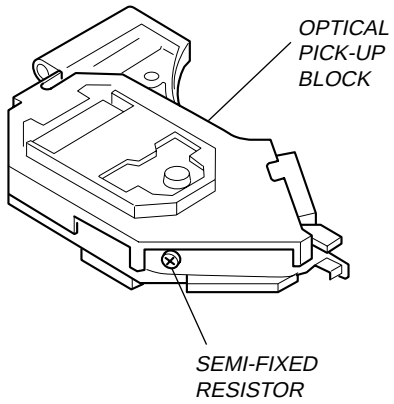
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

US/Canadian model:

If the optical pick-up block is defective, please replace the whole optical pick-up block.
Never turn the semi-fixed resistor located at the side of optical pick-up block.



AEP/UK model:

CLASS 1
LASER PRODUCT

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CAUTION—INVISIBLE LASER RADIATION WHEN OPEN
DO NOT STARE INTO BEAM OR
VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

This label is located on the drive unit's internal chassis.

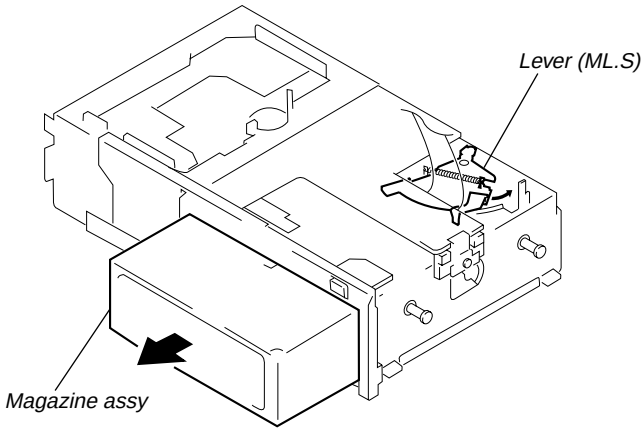
When replacing the chassis (U.S) sub assy of mechanism deck which have the "CAUTION LABEL" attached, please be sure to put a new CAUTION LABEL (3-223-913-11) to the chassis (U.S) sub assy.

DISC MAGAZINE GETTING OUT PROCEDURE ON THE POWER SUPPLY IS OFF

Remove the COVER (LOWER.T) ass'y beforehand

1) Press the lever (ML.S) to arrow direction.
2) Removal the magazine assy.

Note: Take out the magazine only when the tray is completely within the magazine. If the disk or tray is sticking out, turn on the power and eject the magazine.



CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Notes on CD-R discs

You can play CD-Rs (recordable CDs) designed for audio use on this unit.

Look for this mark to distinguish CD-Rs for audio use.

This mark denotes that a disc is not for audio use.

Some CD-Rs (depending on the equipment used for its recording or the condition of the disc) may not play on this unit.

You cannot play a CD-R that is not finalized*.

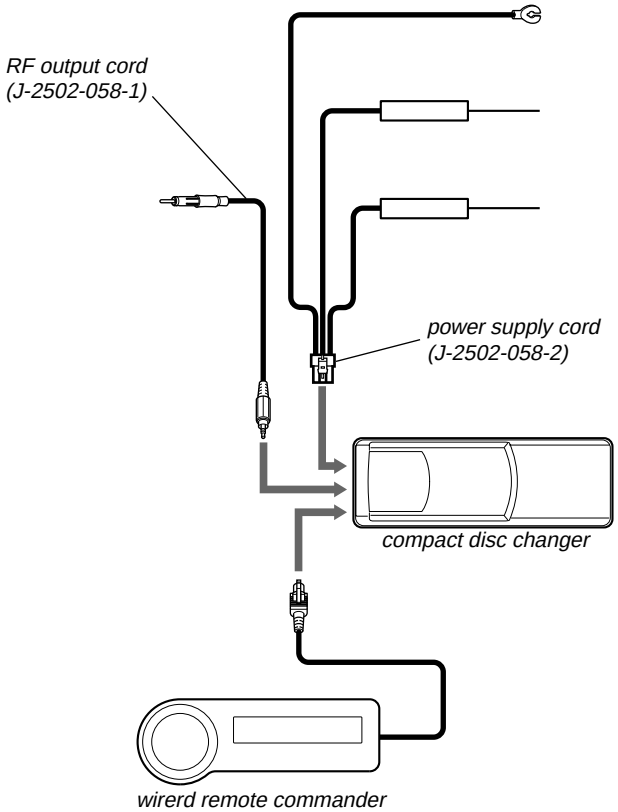
* **A process necessary for a recorded CD-R disc to be played on the audio CD player.**

TEST DISC

This set can playback a CD-R, CD-RW for audio use. When test this set, use the following test disc.
Test disc for CD-R: TCD-R082LMT (Part No.: J-2502-063-1)

JIG ON REPAIRING

When repairing this set, connect the jig (cord) for RF output extract (Part No. J-2502-058-1) and power supply (Part No. J-2502-058-2) as the figure shown below.



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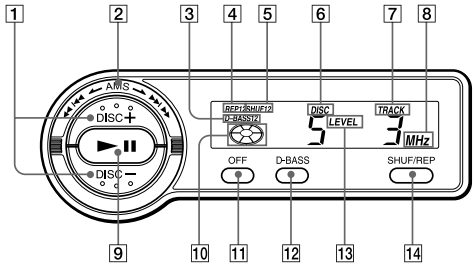
SECTION 1
GENERAL

This section is extracted from instruction manual.

Location and function of controls

Nomenclature

Wired remote (RM-X82RF)/Télécommande à fil (RM-X82RF)



1 **DISC (disc select) buttons**

2 **AMS (Automatic Music Sensor/manual search) control**
Depending on which side of the control you push down, you can select from the following functions.

3 **D-BASS indication**

4 **REP (repeat play) indication**

5 **SHUF (shuffle play) indication**

6 **DISC (disc number) indication**
The indicated disc number matches the disc number in the disc magazine.

7 **TRACK (track number) indication**

8 **MHz (frequency) indication**

9 **▶II (play/pause) button**
If pressed during CD playback, the CD will pause. If pressed again, CD playback will continue.

10 **Play/pause indication**
Turns around during CD playback and flashes when the pause button is pressed.

11 **OFF button**

12 **D-BASS button**

13 **LEVEL (output level) indication**

14 **SHUF/REP (shuffle play/repeat play/control mode set) button**

1 **Touches DISC (sélection de disques)**

2 **Commande AMS (détecteur automatique de musique/recherche manuelle)**
Suivant le côté de la commande sur lequel vous appuyez, vous pouvez sélectionner les fonctions suivantes.

3 **Indication D-BASS**

4 **Indication REP (répétition de la lecture)**

5 **Indication SHUF (lecture aléatoire)**

6 **Indication DISC (numéro de disque)**
Le numéro de disque indiqué correspond au numéro de disque dans le chargeur de disques.

7 **Indication TRACK (numéro de plage)**

8 **Indication MHz (fréquence)**

9 **Touche ▶II (lecture/pause)**
Si vous appuyez sur cette touche en cours de lecture CD, le CD passe en mode de pause. Si vous appuyez de nouveau sur cette touche, la lecture CD reprend.

10 **Indication de lecture/pause**
Tourne pendant la lecture d'un CD et clignote lorsque la touche de pause est actionnée.

11 **Touche OFF (arrêt de la lecture de CD)**

12 **Touche D-BASS**

13 **Indication LEVEL (niveau de sortie)**

14 **Touche SHUF/REP (lecture aléatoire/lecture répétée/mode de réglage)**

AMS function
To locate the beginning of a track, push down
▶▶| to locate the beginning of the next track.
|◀◀ to locate the beginning of the track currently played.
If you push down the control repeatedly, the beginnings of all following or previous tracks will be located until the end of the disc is reached.

Manual search function
To quickly locate a desired point of a track, push down **and hold**
▶▶ to fast-forward.
◀◀ to fast-reverse.
The elapsed playing time of the track will be shown in the display window during manual search.

Disc select function
To select a desired disc, press **momentarily**
DISC+ to select the next disc.
DISC– to select the previous disc.

Fonction AMS
Pour localiser le début d'une plage, appuyez sur
▶▶| pour localiser le début de la plage suivante.
|◀◀ pour localiser le début de la plage en cours.
Si vous appuyez plusieurs fois de suite sur la commande, le début de chacune des plages précédentes ou des suivantes est localisé jusqu'à la fin du disque.

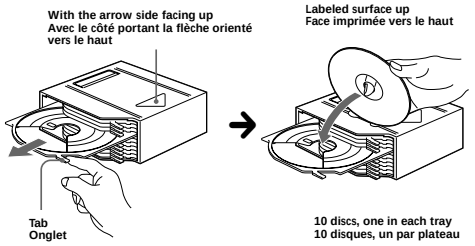
Fonction de recherche manuelle
Pour localiser rapidement un point désiré d'une plage, **maintenez enfoncé**
▶▶ pour avancer rapidement.
◀◀ pour reculer rapidement.
La durée écoulée de la plage apparaît sur l'afficheur pendant la recherche manuelle.

Fonction de sélection de disques
Quand vous voulez sélectionner un disque, appuyez **momentanément** sur
DISC+ pour choisir le disque suivant.
DISC– pour choisir le disque précédent.

Inserting a disc

Insertion d'un disque

1


With the arrow side facing up
Avec le côté portant la flèche orientée vers le haut
Labeled surface up
Face imprimée vers le haut
Tab
Onglet
10 discs, one in each tray
10 disques, un par plateau

Use the supplied disc magazine or the disc magazine XA-250. The disc magazine XA-10B cannot be used with this unit. If you use any other disc magazine, it may cause a malfunction.

Notes

- *To listen to an 8 cm (3 in.) CD, use the optional Sony CD adaptor CSA-8. Be sure to always use the specified adaptor, as failing to do so may cause a malfunction of the unit. If you use any other adaptor, the unit may not operate properly. When using the Sony CD adaptor, make sure that the three catches on the adaptor are firmly latched onto the 8 cm (3 in.) CD.*
- *Do not insert the Sony CD adaptor CSA-8 in the disc magazine without a disc, malfunction may result.*

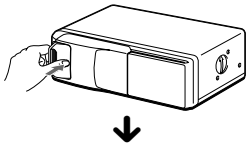
Utilisez le magasin à disques fourni ou un magasin à disques XA-250. Vous ne pouvez pas utiliser de magasin à disques XA-10B avec cet appareil. L'utilisation d'un autre type de magasin à disques risque de provoquer un dysfonctionnement.

Remarques

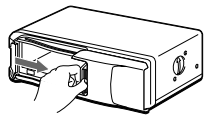
- *Pour écouter un CD de 8 cm (3 po.) CD, utilisez l'adaptateur CD Sony en option CSA-8. Veillez à toujours utiliser l'adaptateur spécifié, faute de quoi vous risquez de provoquer un dysfonctionnement de l'appareil. Si vous utilisez un autre adaptateur, l'appareil risque de ne pas fonctionner correctement. Lorsque vous employez l'adaptateur CD Sony, assurez-vous que les trois encoches de l'adaptateur soient fermement engagées sur le CD de 8 cm (3 po.).*
- *N'introduisez pas l'adaptateur CD Sony CSA-8 dans le chargeur sans disque, car il pourrait en résulter un dysfonctionnement.*

2

Push to unlock the door
Poussez pour déverrouiller la porte



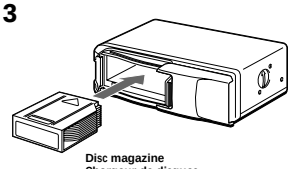
Slide open
Coulissez pour ouvrir



Note
To prevent injury, do not insert your hand in the CD changer.

Remarque
Pour éviter toute blessure, ne pas introduire la main dans le changeur de CD.

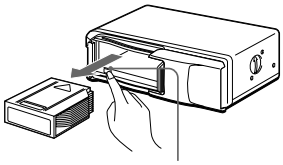
3



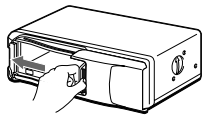
If the disc magazine does not lock properly
Take out the disc magazine, press ⏏, and re-insert it.

Si vous ne pouvez pas fermer le chargeur de disques
Retirez le chargeur, appuyez sur ⏏ et réintroduisez-le.

To remove
Retrait



4



Use the unit with the door closed completely
Otherwise, foreign matter may enter the unit and contaminate the lenses inside the CD changer.

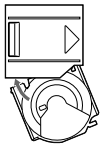
Utilisez cet appareil avec la fenêtre complètement fermée
Sinon, des corps étrangers risquent de pénétrer à l'intérieur de l'appareil et d'encrasser les lentilles à l'intérieur du changeur de CD.

Notes on the disc magazine

- Do not leave the disc magazine in locations with high temperature and high humidity, such as on a car dashboard or in the rear window where the disc magazine will be subject to direct sunlight.
- Do not place more than one disc at a time onto a tray, otherwise the CD changer and the discs may be damaged.
- Do not drop the disc magazine or subject it to a violent shock.

When the tray comes out

Normally, the trays will not come out of the disc magazine. However, if they are pulled out of the disc magazine, it is easy to re-insert them.



With the cut-away portion of the tray facing you, insert the right corner of the tray in the slot, then push in the left corner until it clicks.

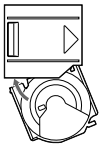
Note
Do not insert the tray upside down or in the wrong direction.

Remarques sur le chargeur de disques

- Ne pas laisser le chargeur de disques dans un endroit très chaud ou très humide comme sur le tableau de bord ou sur la plage arrière d'une voiture où il serait en plein soleil.
- Ne placez pas plus d'un disque à la fois par plateau, faute de quoi vous risquez d'endommager le changeur de CD et les disques.
- Ne pas laisser tomber le chargeur de disques ni le cogner.

Si un plateau s'enlève

En principe, les plateaux ne s'enlèvent pas du magasin. S'ils s'enlèvent du magasin, il est cependant facile de les y réintroduire.



L'encoche du plateau étant face à vous, introduisez l'angle droit du plateau dans la fente et poussez ensuite sur l'angle gauche jusqu'à ce qu'il s'encliquette.

Remarque
N'introduisez pas le plateau à l'envers ni dans le mauvais sens.

Notes on handling discs

A dirty or defective disc may cause sound drop-outs during playback. To enjoy optimum sound, handle the disc as follows.

- **Handle the disc by its edge, and do not touch the unlabled surface. (fig. A)**
- **Do not stick paper or tape on the disc. (fig. B)**
- **Keep your discs in their cases or disc magazines when not in use.**
  Do not expose the discs to direct sunlight or heat sources such as hot air-ducts. Do not leave the discs in a car parked in direct sunlight where there can be a considerable rise in temperature inside the car. (fig. C)
- **Before playing, clean the discs with an optional cleaning cloth. Wipe each disc in the direction of the arrows. (fig. D)**
  Do not use solvents such as benzine, thinner, commercially available cleaner, or antistatic spray intended for analog discs.
- **Discs with special shapes (heart-shaped discs, octagonal discs etc.) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.**

Notes on discs

If you use the discs explained below, the sticky residue can cause the disc to stop spinning and may cause malfunction or ruin your discs.
Do not use second-hand or rental CDs that have a sticky residue on the surface (for example, from peeled-off stickers or from ink, or glue leaking from under the stickers).

- **There are paste residue. Ink is sticky. (fig. E)**
  Do not use rental CDs with old labels that are beginning to peel off.
- **Stickers that are beginning to peel away, leaving a sticky residue. (fig. F)**
  Do not use your discs with labels or stickers attached.
- **Labels are attached. (fig. G)**

Notes on CD-R discs

- **You can play CD-Rs (recordable CDs) designed for audio use on this unit (fig. H).**
- **Some CD-Rs (depending on the equipment used for its recording or the condition of the disc) may not play on this unit.**
- **You cannot play a CD-R that is not finalized*.**

** A process necessary for a recorded CD-R disc to be played on the audio CD player.*

Remarques sur la manipulation des disques

Un disque sale ou défectueux peut provoquer des pertes de son à la lecture. Manipuler le disque comme suit pour obtenir un son optimal.

- **Saisissez les disques par les bords et n'en touchez jamais la surface. (fig. A)**
- **Ne collez pas de papier ni de bande adhésive sur le disque. (fig. B)**
- **Conservez vos disques dans leurs boîtiers ou des pochettes de rangement lorsqu'ils ne sont pas utilisés.**
  N'exposez pas les disques au rayonnement direct du soleil ni à des sources de chaleur comme des conduits d'air chaud. Ne laissez pas les disques dans une voiture parquée en plein soleil où la température intérieure de l'habitable risque d'augmenter considérablement. (fig. C)
- **Avant la lecture, essuyer les disques avec un chiffon de nettoyage optionnel. Essuyer chaque disque dans le sens des flèches. (fig. D)**
  Ne pas utiliser de solvants tels que de la benzine, du diluant, des produits de nettoyage vendus dans le commerce ou des vaporisateurs anti-statiques destinés aux disques analogiques.
- **Il n'est pas possible d'utiliser les disques de formes spéciales (en forme de cœur ou octogonaux, etc.) avec cet appareil. Vous risquez d'endommager l'appareil. N'essayez jamais de lire ces disques.**

Remarques sur les disques

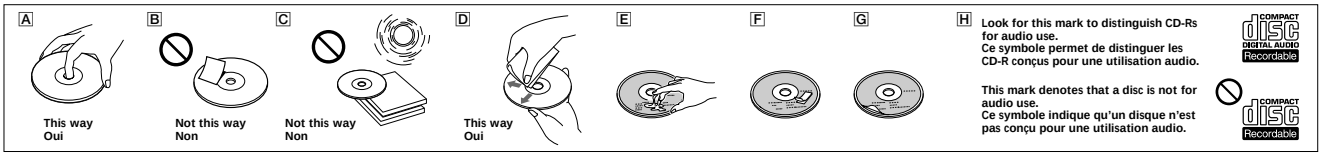
Si vous utilisez les disques décrits ci-dessous, le résidu adhésif risque de provoquer l'arrêt de la rotation du disque et d'entraîner un dysfonctionnement ou d'endommager vos disques.
N'utilisez pas de CD de seconde main ou de location qui présentent des résidus adhésifs à la surface (par exemple d'étiquettes décollées ou d'encre, de colle dépassant de l'étiquette).

- **Résidus de colle. L'encre colle. (fig. E)**
  N'utilisez pas de CD de location avec d'anciennes étiquettes qui commencent à se décoller.
- **Les étiquettes qui commencent à se décoller laissent des résidus adhésifs. (fig. F)**
  N'utilisez pas vos disques avec des étiquettes ou des autocollants apposés dessus.
- **Les étiquettes sont fixées. (fig. G)**

Remarques sur les disques CD-R

- **Vous pouvez écouter avec cet appareil des CD-R (CD enregistrables) conçus pour une utilisation audio. (fig. H)**
- **Certains CD-R (en fonction des conditions de l'équipement d'enregistrement ou du disque) risquent de ne pas être lus avec cet appareil.**
- **Vous ne pouvez pas lire de disques CD-R non finalisés*.**

** Un processus nécessaire à la lecture des disques CD-R enregistrés sur le lecteur de CD audio.*



Moisture condensation

On a rainy day or in a very damp area, moisture may condense on the lenses inside the unit, and the unit will not operate properly. In such a case, **remove the disc magazine and wait for about an hour until the moisture has evaporated.**

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Remarque sur la condensation d'humidité

Les jours de pluie et dans les régions très humides, il se peut que de l'humidité se condense sur les objectifs à l'intérieur de l'appareil, qui risque alors de ne pas fonctionner correctement. En pareil cas, **retirez le chargeur de disques et attendez environ une heure que l'humidité se soit complètement évaporée.**

Si vous avez des questions ou des problèmes au sujet de votre appareil qui ne sont pas abordés dans le présent mode d'emploi, consultez votre revendeur Sony.

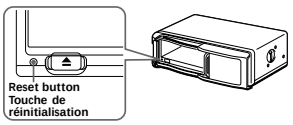
Operation

Precautions

- This unit cannot be used with a car audio without an FM tuner.
- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before operating it.
- If no power is being supplied to the unit, check the connections first. If everything is in order, check the fuse.
- Avoid installing the CD changer and wired remote in places:
  — subject to temperature exceeding 55°C (131°F).
  — subject to direct sunlight.
  — near heat sources (such as heaters).
  — exposed to rain or moisture.
  — exposed to excessive dust or dirt.
  — subject to excessive vibration.

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit. Press the reset button with a pointed object, such as a ball-point pen, etc.



Listening to a CD

1 Turn on the FM tuner of your car audio.

2 Tune in the selected transmitting frequency* with the FM tuner of your car audio.

** The frequency of the unit is set to 88.3 MHz at the factory.*

You can change the frequency. (See "Changing the transmitting frequency" below.)

3 Press ▶II.

CD playback starts.

4 Adjust the volume with the volume control on your car audio.

All the tracks play from the beginning.

Stopping CD play

Press (OFF).

Notes

- *When CD playback stops, you may hear some noise from the speakers. To prevent this from happening, turn the volume down before stopping CD playback.*
- *If you turn off the ignition switch of your car without stopping CD playback, it will automatically resume CD playback from where it was stopped when you turn on the ignition switch again.*

Listening to the radio or a tape

Be sure to stop CD playback before you start listening to the radio or a tape.

Note

Be sure to stop CD playback, otherwise there may be some interference with radio reception.

Playing tracks in random order
— Shuffle Play

You can select:
- SHUF 1–to play the tracks on the current disc in random order.
- SHUF 2–to play all the discs in random order.

Press (SHUF/REP) repeatedly until the desired setting appears (SHUF1 or SHUF2).
After five seconds, shuffle play starts.

Each time you press (SHUF/REP), the display changes as follows:

SHUF 1 → SHUF 2 → REP 1 → Cancel (SHUF off) → REP 2 →

To go back to the normal playback mode, press (SHUF/REP) repeatedly until the "SHUF" or "REP" indication disappears.

Playing tracks repeatedly
— Repeat Play

You can select:
- REP 1–to repeat the track.
- REP 2–to repeat the disc.

Press (SHUF/REP) repeatedly until the desired setting appears (REP1 or REP2).
After five seconds, the repeat play starts.

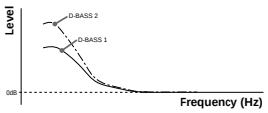
Each time you press (SHUF/REP), the display changes as follows:

SHUF 1 → SHUF 2 → REP 1 → Cancel (REP off) → REP 2 →

To go back to the normal playback mode, press (SHUF/REP) repeatedly until the "REP" or "SHUF" indication disappears.

Boosting the bass sound
— D-bass

You can enjoy a powerful bass sound. The D-bass function boosts the low frequency signal.
You can hear the bass line more clearly even while the vocal volume remains the same. You can emphasize and adjust the bass sound easily with the D-BASS button.



Adjusting the bass curve

Press (D-BASS) repeatedly to select the desired bass curve.
As the D-BASS number increases so does the effect.

D-BASS 1 → D-BASS 2 → Cancel (D-BASS off) →

Note

Setting the output level from 4 to 5, the amount of bass boost decreases to avoid distortion.

Changing the transmitting frequency

Because this unit processes CD playback sound through an FM tuner, there may be interference noise during CD playback. In such a case, change the frequency of the modulated RF signal transmitted from the unit. The initial setting is 88.3 MHz.

1 Press (SHUF/REP) for two seconds until frequency appears.

2 Press (DISC+) or (DISC–) repeatedly to select the frequency.
Each time you press (DISC+) or (DISC–), the frequencys changes as follows:

(DISC–) : 88.3 MHz → 89.9 MHz → 89.7 MHz → 89.5 MHz → 89.3 MHz → 89.1 MHz → 88.9 MHz → 88.7 MHz → 88.5 MHz → 88.3 MHz
(DISC+) : 88.3 MHz → 88.5 MHz → 88.7 MHz → 88.9 MHz → 89.1 MHz → 89.3 MHz → 89.5 MHz → 89.7 MHz → 89.9 MHz → 88.3 MHz

3 Press (SHUF/REP) for two seconds.

Notes

- *When you change the transmitting frequency on the unit, be sure to tune your FM tuner to the newly selected one.*
- *Press ▶II on the wired remote before changing the frequency if the power to the unit is turned off.*

Fonctionnement

Précautions

- Cet appareil ne peut être utilisé avec un autoradio sans syntoniseur FM.
- Si votre voiture est parquée en plein soleil, provoquant ainsi une augmentation considérable de la température dans l'habitacle, laissez l'appareil refroidir avant de l'utiliser.
- Si l'appareil n'est pas alimenté, vérifiez d'abord les connexions. Si tout est en ordre, contrôlez le fusible.
- Evitez d'installer le changeur de CD et la télécommande à fil à un endroit :
  — où la température peut dépasser 55°C (131°F),
  — en plein soleil,
  — près d'une source de chaleur (comme un chauffage),
  — exposé à la pluie ou à l'humidité,
  — poussiéreux ou sale,
  — exposé à des vibrations fortes.

Réinitialisation de l'appareil

Avant la première mise en service de cet appareil ou après avoir remplacé la batterie de la voiture, vous devez réinitialiser l'appareil.
Appuyez sur la touche de réinitialisation à l'aide d'un objet pointu comme un stylo à bille, etc.

Lecture d'un CD

1 Mettez sous tension le syntoniseur FM de votre autoradio.

2 Syntonisez la fréquence de transmission* sélectionnée avec le syntoniseur FM de votre autoradio.

** La fréquence de l'appareil est réglée par défaut sur 88,3 MHz.*

Vous pouvez changer la fréquence. (Voir "Changement de la fréquence de transmission" ci-dessous.)

3 Appuyez sur ▶II.

La lecture du CD démarre.

4 Réglez le volume à l'aide de la commande du volume de votre autoradio.

Toutes les plages sont reproduites à partir du début.

Pour arrêter la lecture d'un CD

Appuyez sur (OFF).

Remarques

- *Lorsque vous arrêtez la lecture d'un CD, il se peut que vous entendiez des parasites dans les haut-parleurs. Pour éviter ce phénomène, baissez le volume avant d'arrêter la lecture du CD.*
- *Si vous coupez le contact de votre voiture sans arrêter la lecture du CD, celle-ci reprendra automatiquement là où elle a été interrompue lorsque vous remettrez le contact.*

Ecouter la radio ou une cassette

Arrêtez la lecture du CD avant d'écouter la radio ou une cassette.

Remarque

Si vous n'arrêtez pas la lecture du CD, des interférences risquent de se produire avec la réception radio.

Lecture des plages dans un ordre quelconque
— Lecture aléatoire

Vous pouvez sélectionner:
- SHUF 1–pour reproduire les plages du disque en place dans un ordre quelconque.
- SHUF 2–pour reproduire tous les disques dans un ordre quelconque.

Appuyez plusieurs fois sur (SHUF/REP) jusqu'à ce que le réglage souhaité apparaisse (SHUF1 ou SHUF2).
La lecture aléatoire commence dans les cinq secondes qui suivent.

A chaque pression sur (SHUF/REP), l'affichage change de la façon suivante:

SHUF 1 → SHUF 2 → REP 1 → REP 2 → Annulation (SHUF hors service) →

Pour revenir à la lecture normale, appuyez plusieurs fois de suite sur (SHUF/REP) jusqu'à ce que l'indication "SHUF" ou "REP" disparaisse.

Répétition de plages
— Lecture répétée

Vous pouvez sélectionner:
- REP 1–pour répéter une plage.
- REP 2–pour répéter tout un disque.

Appuyez plusieurs fois sur (SHUF/REP) jusqu'à ce que le réglage souhaité apparaisse (REP1 ou REP2).
La lecture répétée commence dans les cinq secondes qui suivent.

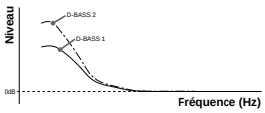
A chaque pression sur (SHUF/REP), l'affichage change de la façon suivante:

SHUF 1 → SHUF 2 → REP 1 → REP 2 → Annulation (REP hors service) →

Pour revenir à la lecture normale, appuyez plusieurs fois de suite sur (SHUF/REP) jusqu'à ce que l'indication "REP" ou "SHUF" disparaisse.

Renforcement des graves
— D-bass

Vous pouvez exploiter des graves puissantes. La fonction D-bass renforce les signaux de basse fréquence.
Vous entendez plus distinctement les graves, même si le volume de la partie vocale reste au même niveau. Vous pouvez renforcer et ajuster les graves à l'aide de la touche D-BASS.



Réglage de la courbe des graves

Appuyez plusieurs fois de suite sur (D-BASS) pour sélectionner la courbe des graves voulue.
L'effet s'intensifie à mesure que la valeur D-BASS augmente.

D-BASS 1 → D-BASS 2 → Annuler (D-BASS off) →

Remarque

En modifiant le niveau de sortie de 4 à 5, le degré d'accentuation du grave diminue afin d'éliminer toute distcasion.

Changement de la fréquence de transmission

Comme cet appareil traite le son de lecture CD via un syntoniseur FM, il se peut qu'il y ait des interférences durant la lecture du CD. En pareil cas, changez la fréquence du signal RF modulé transmis par l'appareil. Le réglage initial est de 88,3 MHz.

1 Appuyez sur (SHUF/REP) pendant deux secondes jusqu'à ce que la fréquence apparaisse.

2 Appuyez plusieurs fois de suite sur (DISC+) ou (DISC–) pour sélectionner la fréquence.
Chaque fois que vous appuyez sur (DISC+) ou (DISC–), la fréquence change dans l'ordre suivant :

(DISC–) : 88.3 MHz → 89.9 MHz → 89.7 MHz → 89.5 MHz → 89.3 MHz → 89.1 MHz → 88.9 MHz → 88.7 MHz → 88.5 MHz → 88.3 MHz
(DISC+) : 88.3 MHz → 88.5 MHz → 88.7 MHz → 88.9 MHz → 89.1 MHz → 89.3 MHz → 89.5 MHz → 89.7 MHz → 89.9 MHz → 88.3 MHz

3 Appuyez sur (SHUF/REP) pendant deux secondes.

Remarques

- *Si vous changez la fréquence de transmission de l'appareil, n'oubliez pas de syntoniser votre syntoniseur FM sur la nouvelle fréquence sélectionnée.*
- *Appuyez sur la touche ▶II de la télécommande filaire avant de changer la fréquence si l'appareil n'est pas sous tension.*

Changing the output level

You can select the output level from the unit. Normally the unit is used at the initial output level; change the level if necessary.

1 **Press SHUF/REP for two seconds.**

2 **Press SHUF/REP momentarily.**

Initial setting

3 **Press DISC+ or DISC– repeatedly to select the output level.**

To decrease the output level

DISC– : ➡

To increase the output level

DISC+ : ➡

4 **Press SHUF/REP for two seconds.**

Note

When you select level 4 or 5, the CD playback sound may be distorted or you may hear some noise. In such a case, select a lower output level on the unit and turn down the overall volume on your car audio.

Changement du niveau de sortie

Vous pouvez sélectionner le niveau de sortie de l'appareil. En principe, l'appareil est utilisé au niveau de sortie initial ; changez le niveau si nécessaire.

1 **Appuyez sur SHUF/REP pendant deux secondes.**

2 **Appuyez brièvement sur SHUF/REP.**

Réglage initial

3 **Appuyez plusieurs fois de suite sur DISC+ ou DISC– pour sélectionner le niveau de sortie.**

Pour diminuer le niveau de sortie

DISC– : ➡

Pour augmenter le niveau de sortie

DISC+ : ➡

4 **Appuyez sur SHUF/REP pendant deux secondes.**

Remarque

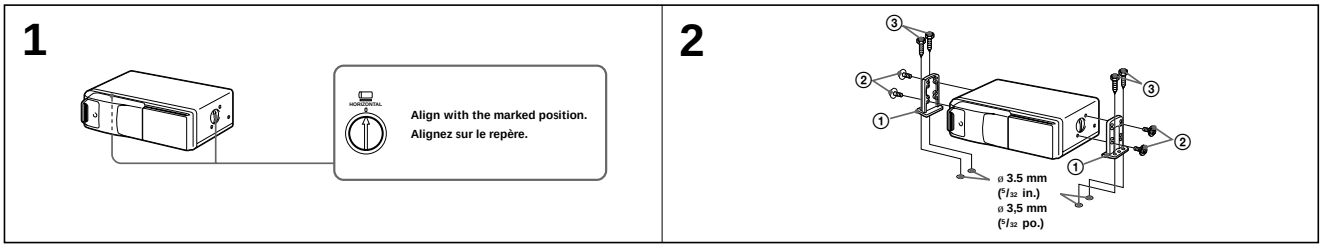
Si vous sélectionnez le niveau 4 ou 5, le son de lecture CD peut comporter des distorsions ou des parasites. En pareil cas, sélectionnez un niveau de sortie inférieure et baissez le volume de votre autoradio.

Installation

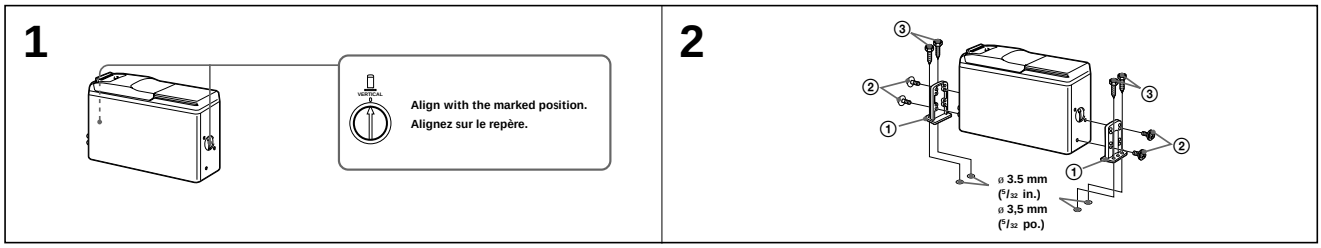
How to install the CD changer

- When you install the CD changer, be careful not to damage wiring or equipment on the other side of the mounting surface.
- The brackets ① provide two positions for mounting, high and low. Use the appropriate screw holes according to your preference.

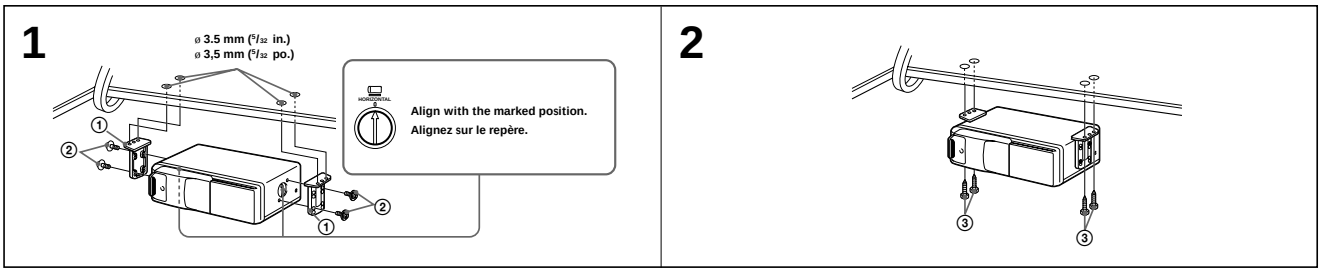
Horizontal installation



Vertical installation



Suspended installation

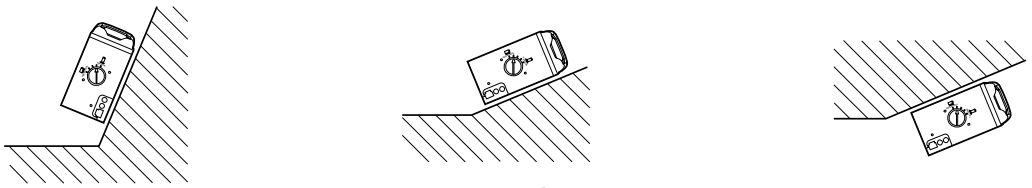


When the unit is to be installed under the rear tray or in the trunk, observe the following.

- Choose the mounting location carefully so the unit can be installed horizontally.
- Make sure the unit does not hinder the action of the torsion bar spring, hinge, etc. of the deck lid.

Inclined installation

After installing the unit, align the dials with one of the marks so the arrow comes as close to a vertical position as possible.



Note

Be sure to align the left and right dials with the same mark.

Installation

Installation du changeur de CD

- Quand vous installez le changeur de CD, veillez à ne pas endommager les câbles ou les instruments qui se trouvent de l'autre côté.
- Les supports ① offrent deux positions de montage, haut et bas. Utilisez les trous de vissage appropriés en fonction de vos préférences.

Installation horizontale

Installation verticale

Installation suspendue

Si vous comptez installer le changeur de CD sous la plage arrière ou dans le coffre, prenez les précautions suivantes.

- Choisissez soigneusement l'emplacement pour que le changeur soit à l'horizontale.
- Assurez-vous que l'appareil n'entrave pas l'action du ressort à barre de torsion, des charnières, etc., du couvercle de la malle.

Installation inclinée

Après avoir installé l'appareil, alignez les disques sur l'un des repères afin que la flèche soit aussi proche que possible de la position verticale.

Remarque

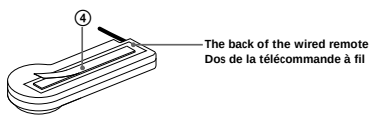
Veillez à aligner les disques gauche et droite sur le même repère.

Installing the wired remote

Use the supplied double-sided adhesive tape ④, and mount the wired remote in a suitable location where it will not interfere with your driving.

Installation de la télécommande à fil

Utilisez la bande à double face adhésive fournie ④ pour installer la télécommande à fil dans un endroit qui ne risque pas de gêner la conduite.



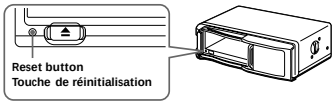
Connections

Caution

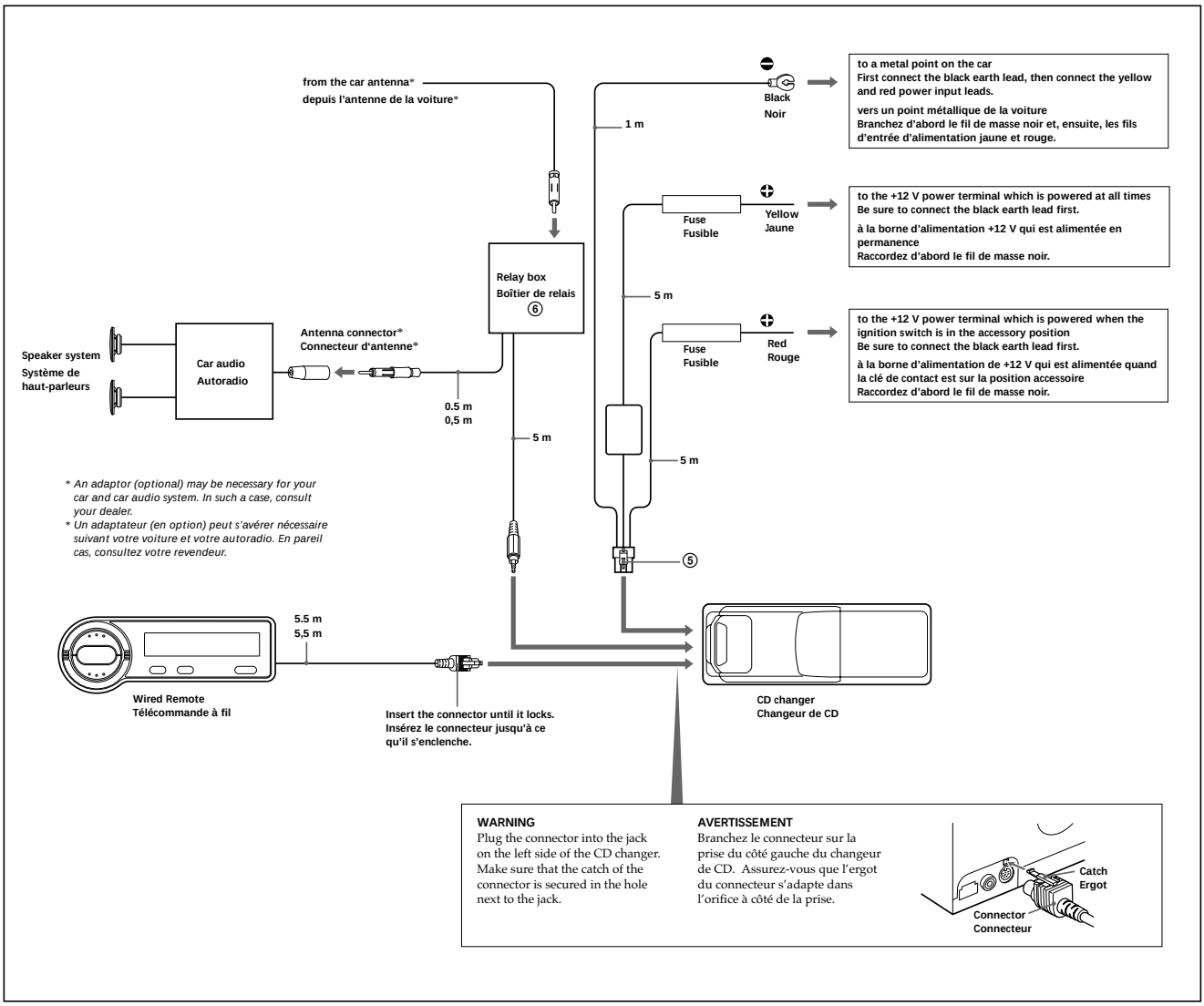
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is powered when the ignition switch is in the accessory position.
- **Run all ground wires to a common earth point.**
- **When finished making all the connections, press the reset button of the CD changer. (See "Reset button" below.)**
- The use of optical instruments with this product will increase eye hazard.

Reset button

After the installation and connections are completed or the batteries have been changed, be sure to press the reset button with a ball-point pen, etc.



Connection diagram


from the car antenna*
depuis l'antenne de la voiture*
Black
Noir
1 m
to a metal point on the car
First connect the black earth lead, then connect the yellow and red power input leads.
vers un point métallique de la voiture
Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.
Fuse
Fusible
Yellow
Jaune
to the +12 V power terminal which is powered at all times
Be sure to connect the black earth lead first.
à la borne d'alimentation +12 V qui est alimentée en permanence
Raccordez d'abord le fil de masse noir.
Relay box
Boîtier de relais
⑥
5 m
Fuse
Fusible
Red
Rouge
to the +12 V power terminal which is powered when the ignition switch is in the accessory position
Be sure to connect the black earth lead first.
à la borne d'alimentation de +12 V qui est alimentée quand la clé de contact est sur la position accessoire
Raccordez d'abord le fil de masse noir.
Speaker system
Système de haut-parleurs
Car audio
Autoradio
Antenna connector*
Connecteur d'antenne*
0.5 m
0,5 m
5 m
5 m
⑤
* An adaptor (optional) may be necessary for your car and car audio system. In such a case, consult your dealer.
* Un adaptateur (en option) peut s'avérer nécessaire suivant votre voiture et votre autoradio. En pareil cas, consultez votre revendeur.
5.5 m
5,5 m
Wired Remote
Télécommande à fil
Insert the connector until it locks.
Insérez le connecteur jusqu'à ce qu'il s'enclenche.
CD changer
Changeur de CD
WARNING
Plug the connector into the jack on the left side of the CD changer. Make sure that the catch of the connector is secured in the hole next to the jack.
AVERTISSEMENT
Branchez le connecteur sur la prise du côté gauche du changeur de CD. Assurez-vous que l'ergot du connecteur s'adapte dans l'orifice à côté de la prise.
Catch
Ergot
Connector
Connecteur

Fuse replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction.

Warning

Use a fuse with the specified amperage rating. Use of a higher amperage fuse may cause serious damage.

Connexions

Précautions

- Cet appareil est uniquement conçu pour fonctionner sur 12 V CC avec une masse négative.
- Avant d'effectuer les raccordements, coupez le contact du véhicule pour éviter tout court-circuit.
- Branchez les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veillez à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoire.
- **Rassemblez tous les fils de terre en un point de masse commun.**
- **Lorsque vous avez terminé toutes les connexions, appuyez sur la touche de réinitialisation du changeur de CD. (Voir "Touche de réinitialisation" ci-dessous.)**
- L'utilisation d'instruments optiques avec ce produit augmente les risques pour les yeux.

Touche de réinitialisation

Après avoir terminé l'installation et les connexions ou remplacé les piles, appuyez sur la touche de réinitialisation du changeur de CD à l'aide d'un stylo à bille, etc.

Schéma de connexion

Remplacement du fusible

Si le fusible saute, vérifiez la connexion d'alimentation et remplacez-le. Si le fusible saute à nouveau quand vous venez de le remplacer, il s'agit peut être d'un mauvais fonctionnement interne.

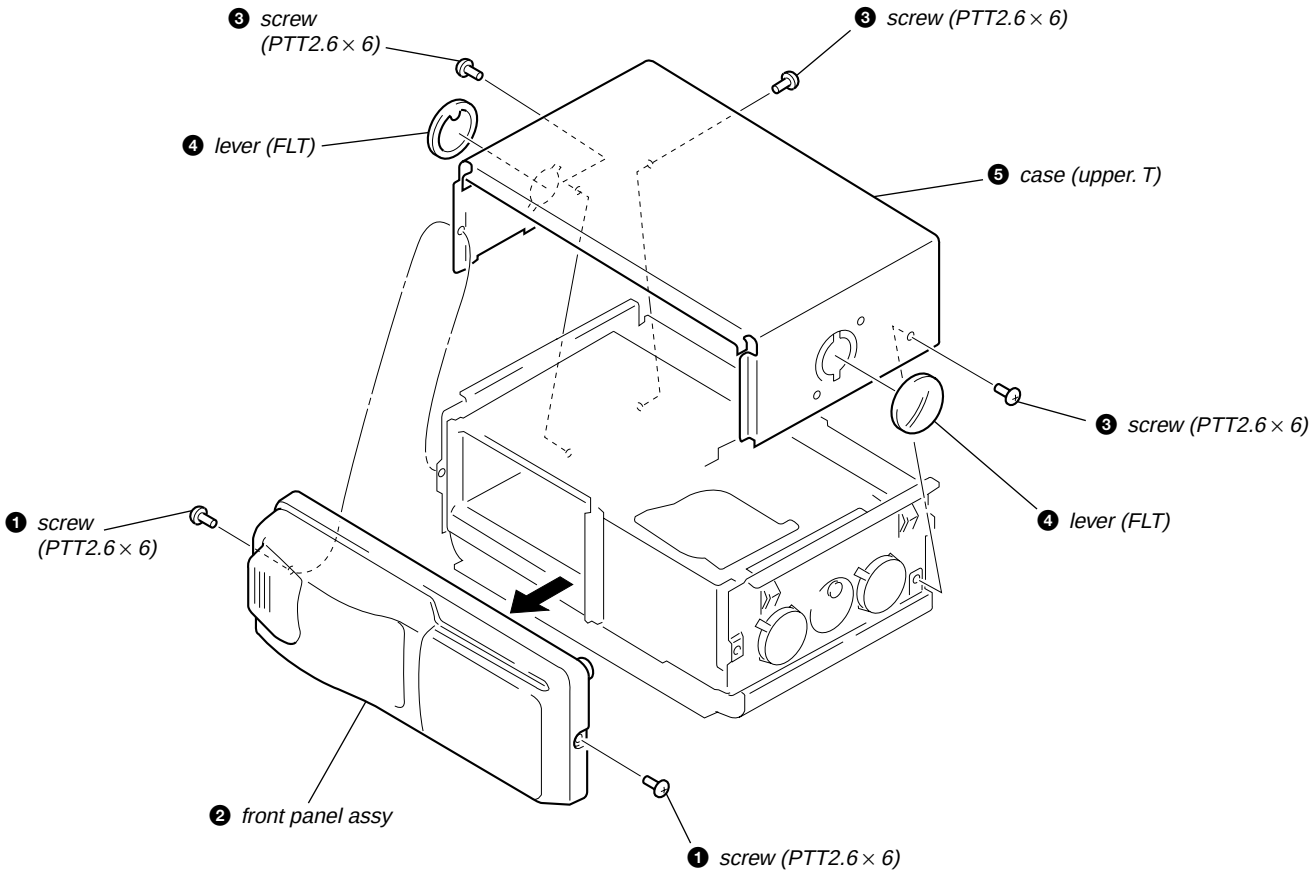
Avertissement

Utilisez un fusible de l'ampérage spécifié. L'utilisation d'un fusible d'ampérage supérieur peut causer de sérieux dommages.

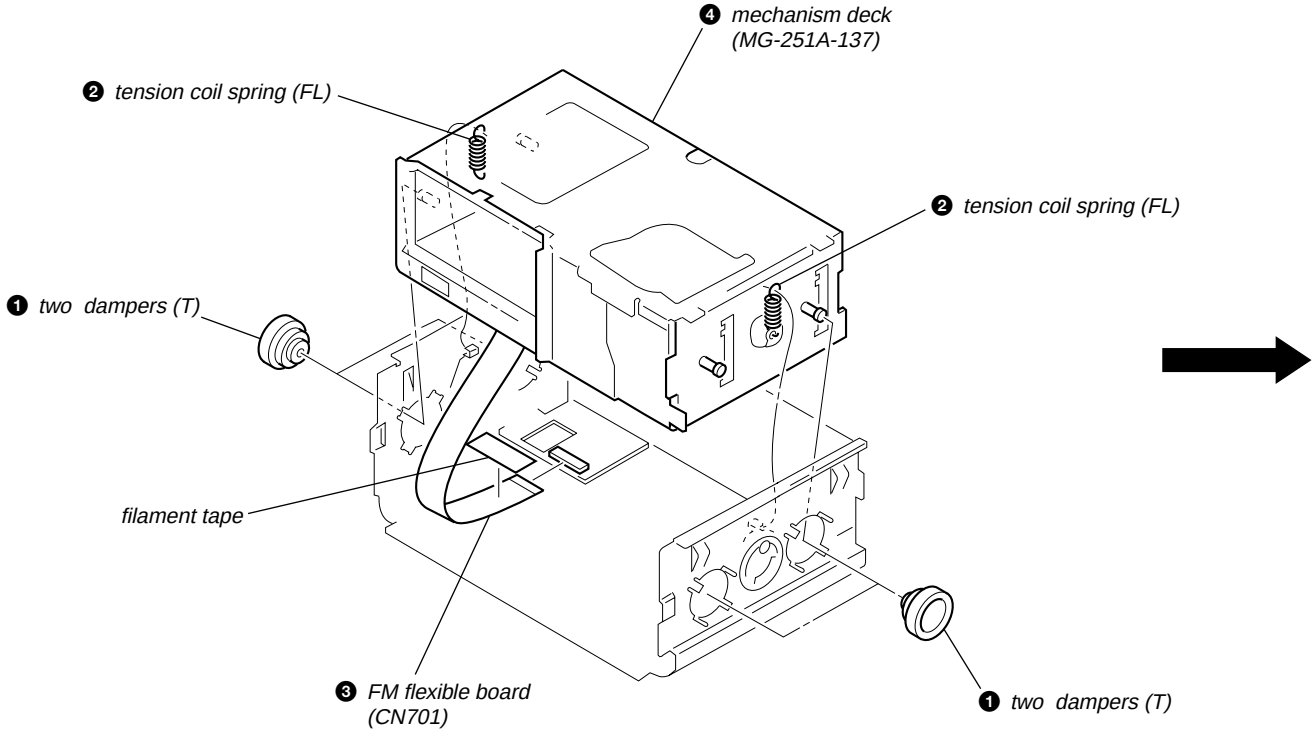
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

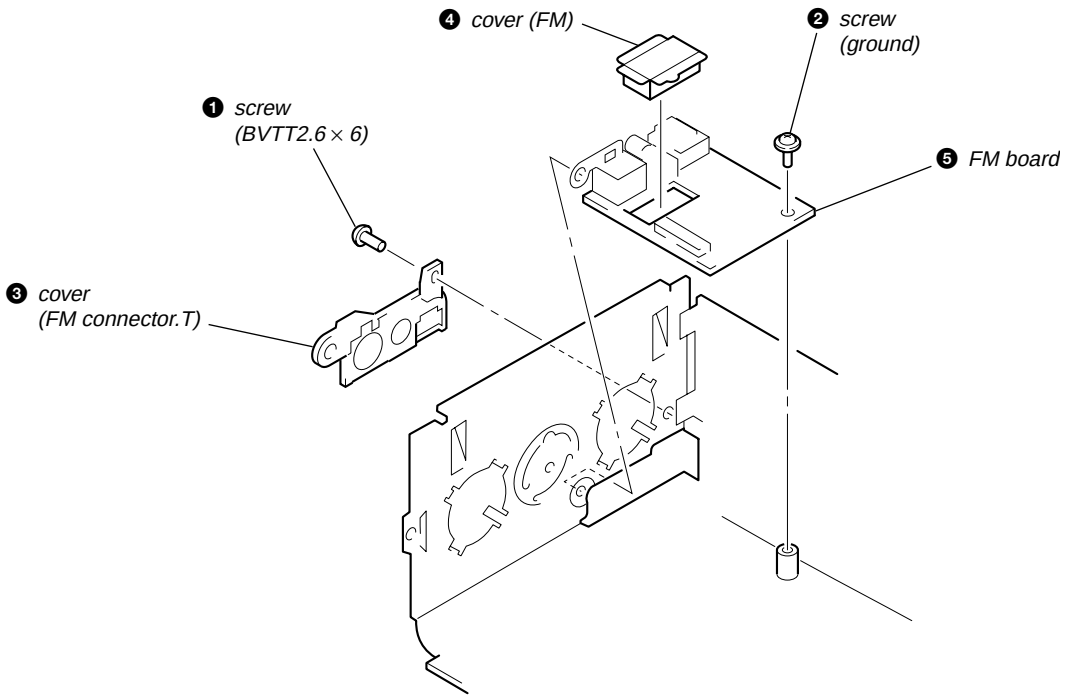
CASE (UPPER. T), FRONT PANEL ASSY


❸ screw (PTT2.6 × 6)
❸ screw (PTT2.6 × 6)
❹ lever (FLT)
❺ case (upper. T)
❸ screw (PTT2.6 × 6)
❹ lever (FLT)
❶ screw (PTT2.6 × 6)
❷ front panel assy
❶ screw (PTT2.6 × 6)

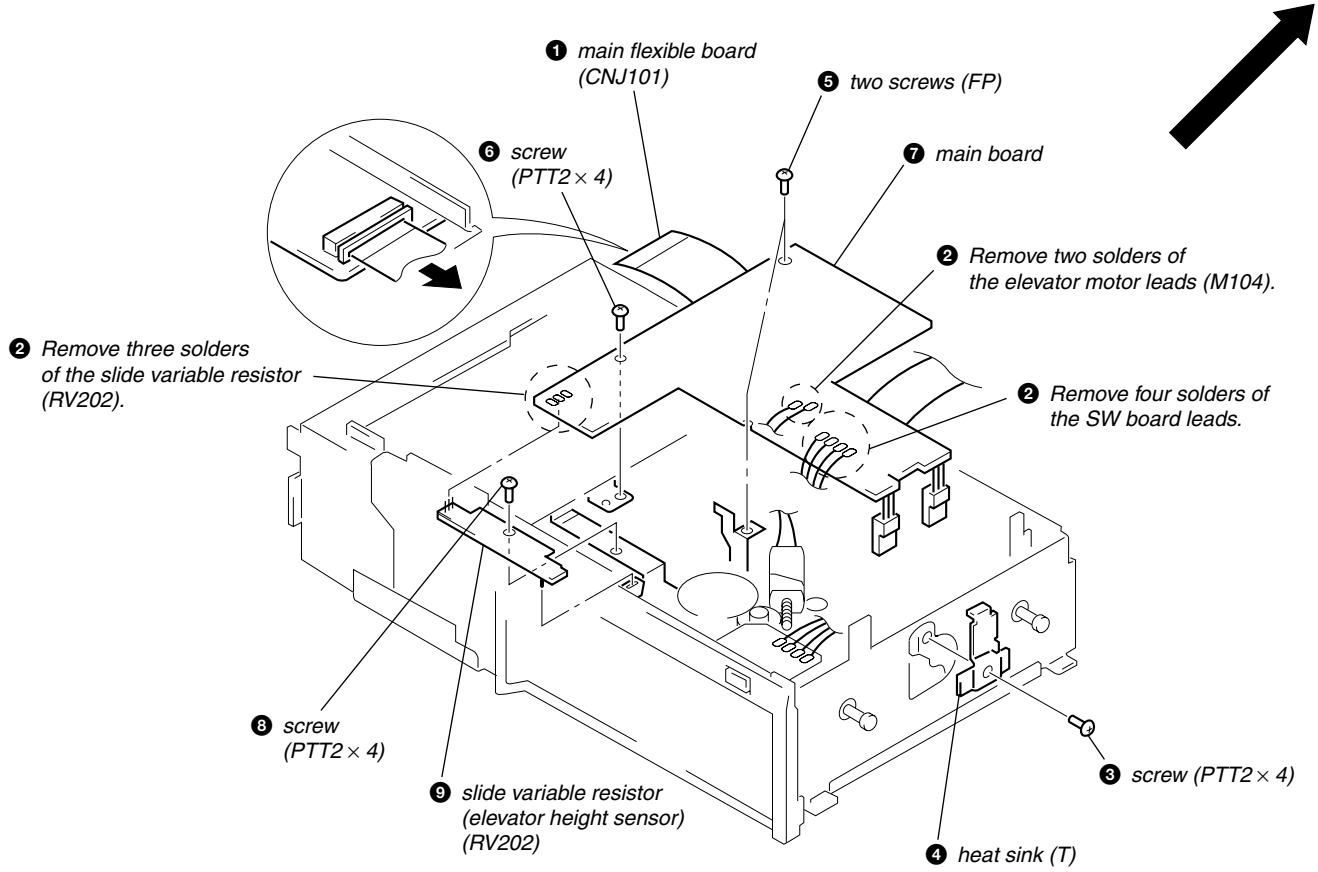
MECHANISM DECK (MG-251A-137)


❹ mechanism deck (MG-251A-137)
❷ tension coil spring (FL)
❷ tension coil spring (FL)
❶ two dampers (T)
filament tape
❸ FM flexible board (CN701)
❶ two dampers (T)

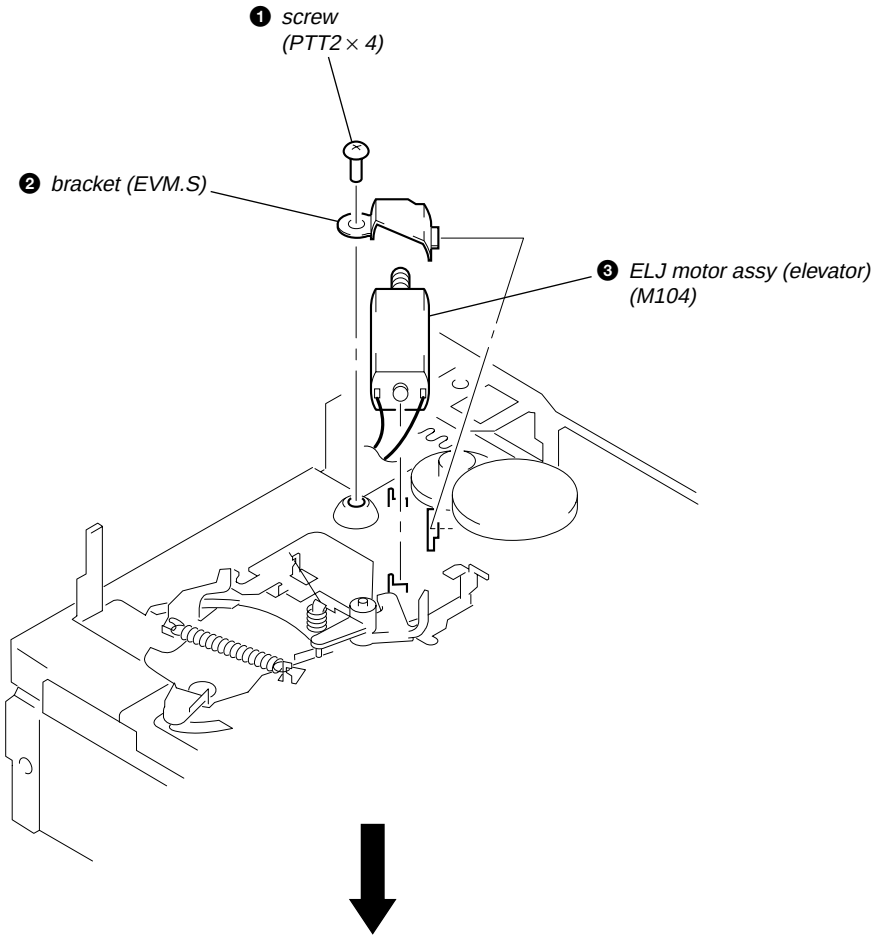
FM BOARD



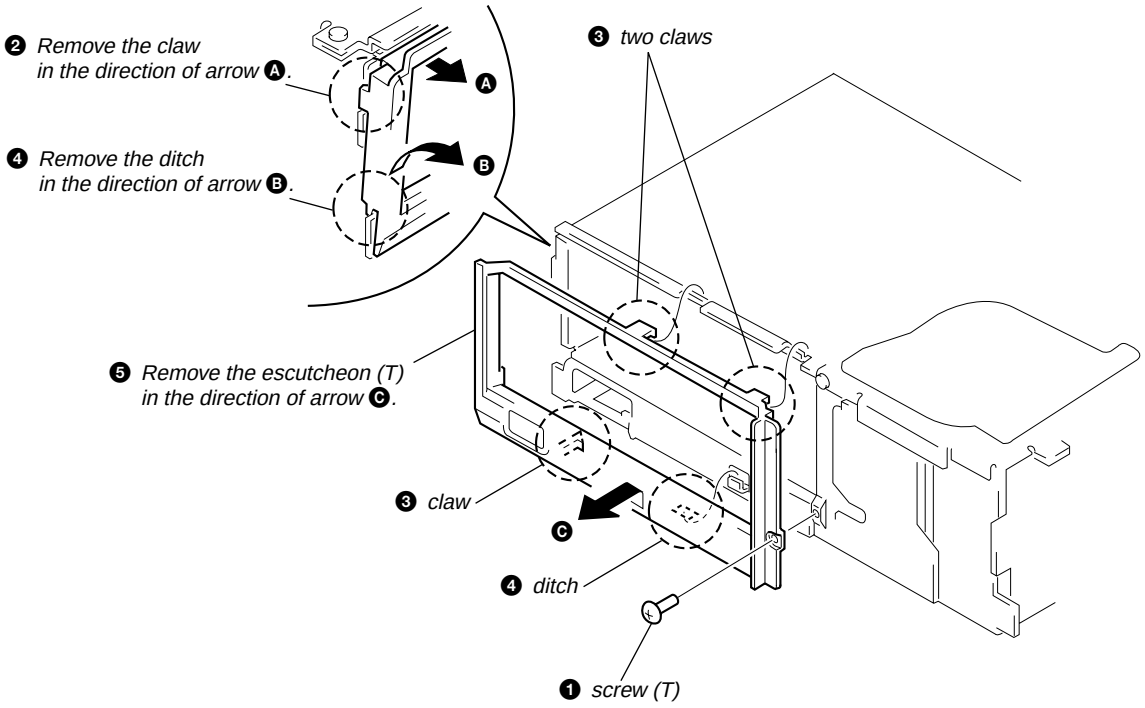
MAIN BOARD, SLIDE VARIABLE RESISTOR (ELEVATOR HEIGHT SENSOR) (RV202)


❶ main flexible board (CNJ101)
❺ two screws (FP)
❻ screw (PTT2 × 4)
❼ main board
❷ Remove two solders of the elevator motor leads (M104).
❷ Remove three solders of the slide variable resistor (RV202).
❷ Remove four solders of the SW board leads.
❽ screw (PTT2 × 4)
❸ screw (PTT2 × 4)
❾ slide variable resistor (elevator height sensor) (RV202)
❹ heat sink (T)

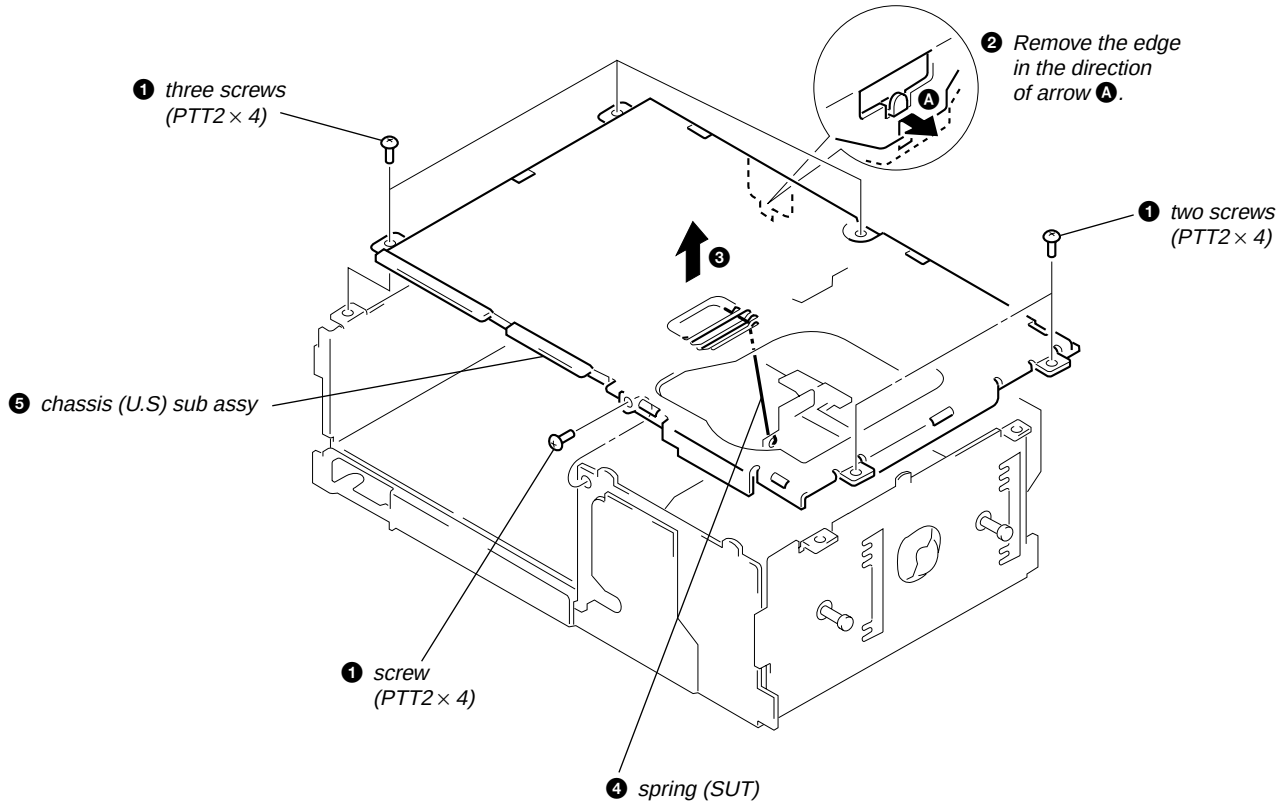
ELJ MOTOR ASSY (ELEVATOR) (M104)



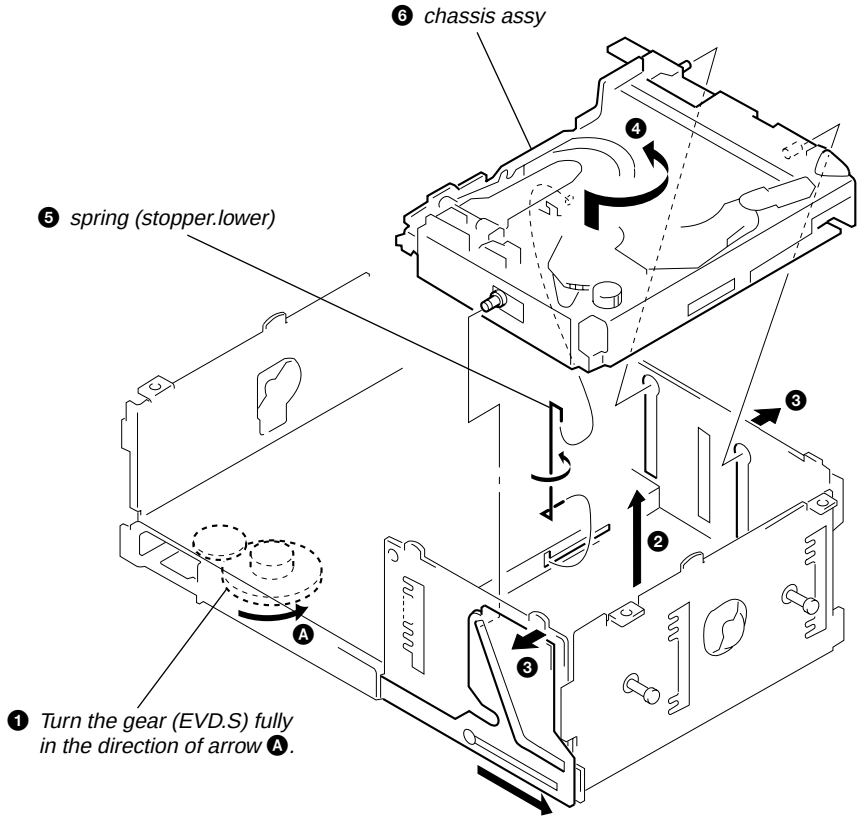
ESCUTCHEON (T)


❷ Remove the claw
in the direction of arrow Ⓐ.
❹ Remove the ditch
in the direction of arrow Ⓑ.
❸ two claws
❺ Remove the escutcheon (T)
in the direction of arrow Ⓒ.
❸ claw
❹ ditch
❶ screw (T)

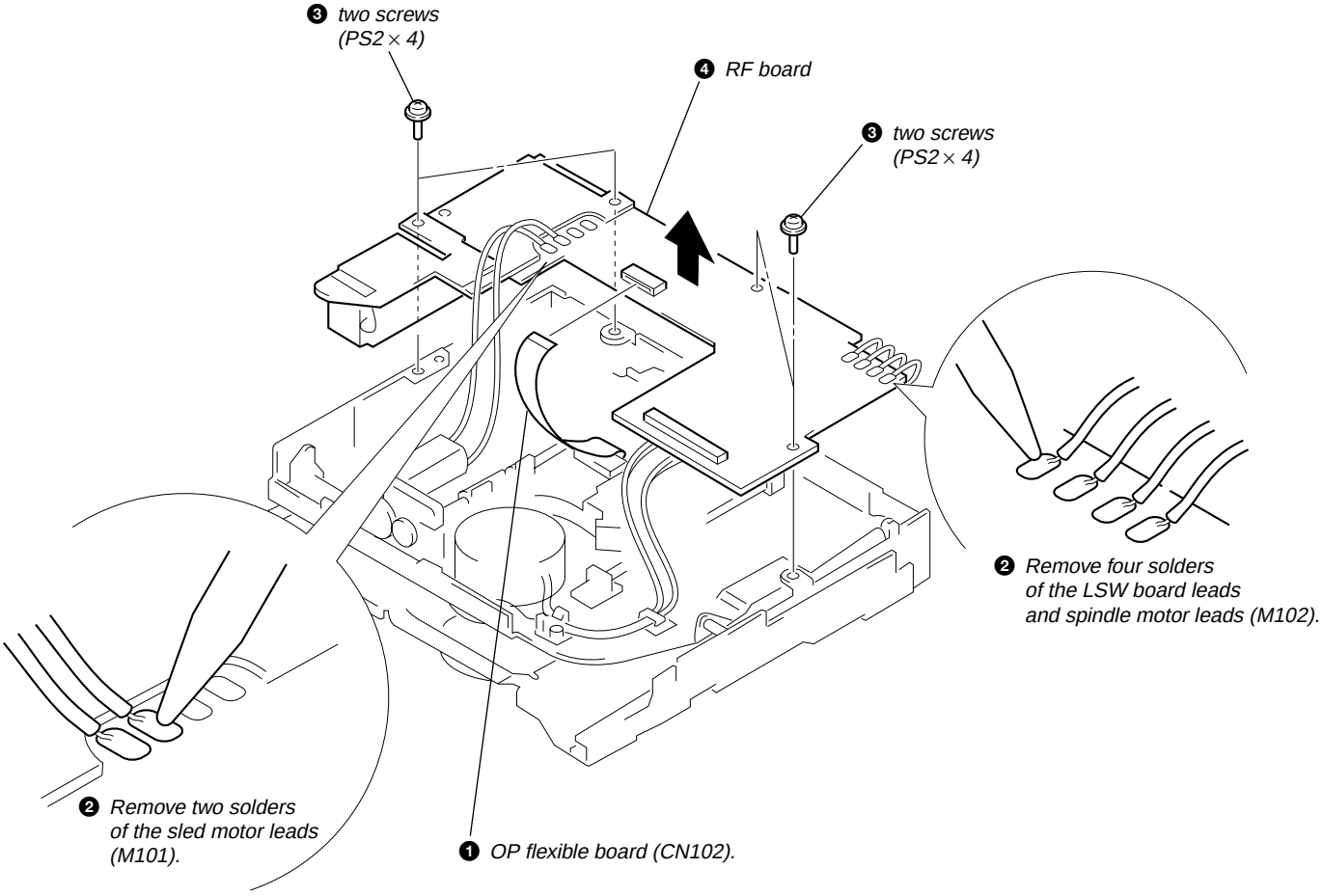
CHASSIS (U.S) SUB ASSY


❶ three screws (PTT2 × 4)
❷ Remove the edge in the direction of arrow Ⓐ.
❶ two screws (PTT2 × 4)
❸
❺ chassis (U.S) sub assy
❶ screw (PTT2 × 4)
❹ spring (SUT)

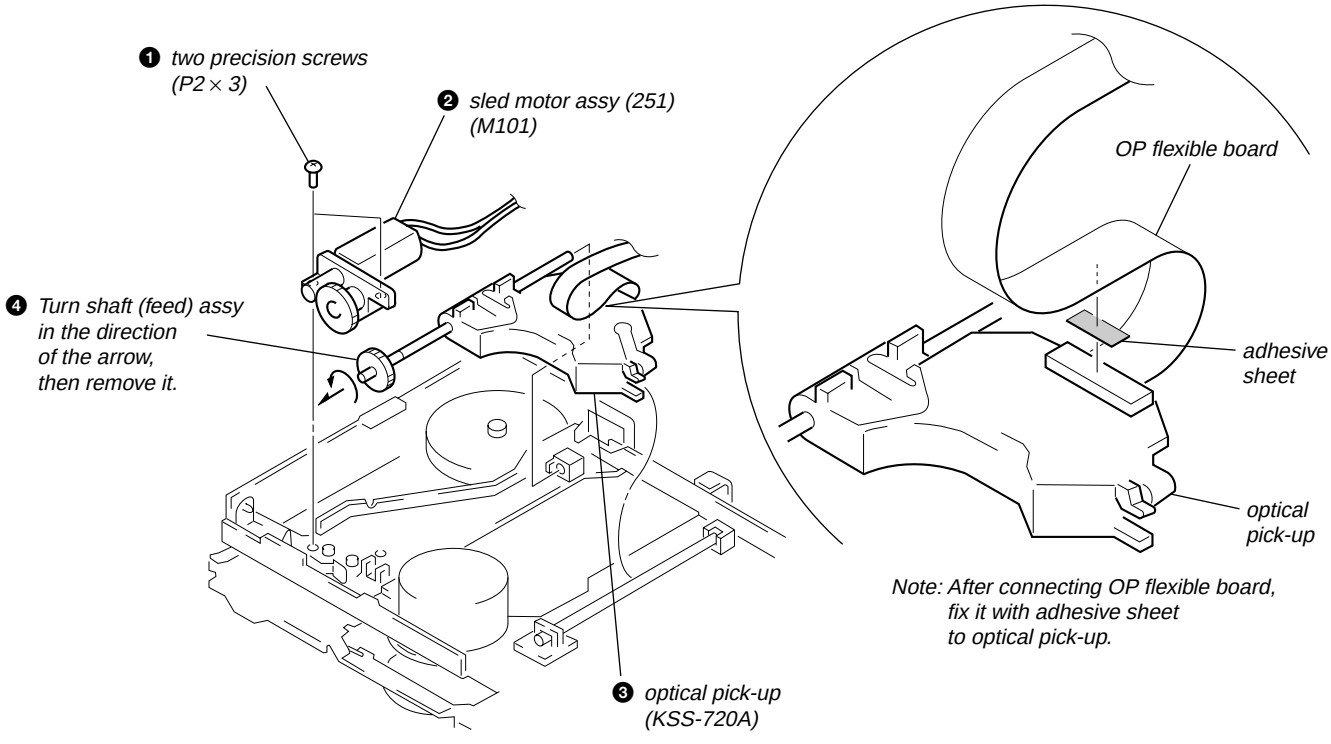
CHASSIS ASSY



RF BOARD

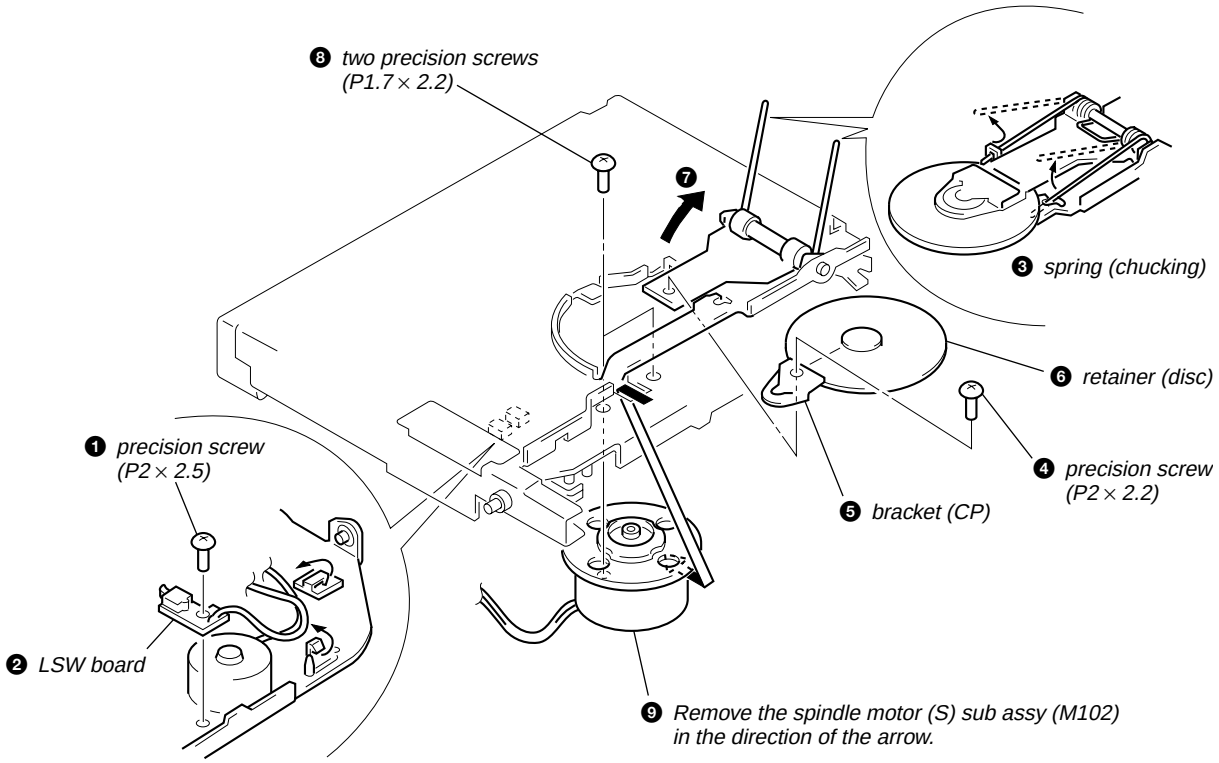

❸ two screws (PS2 × 4)
❹ RF board
❸ two screws (PS2 × 4)
❷ Remove four solders of the LSW board leads and spindle motor leads (M102).
❷ Remove two solders of the sled motor leads (M101).
❶ OP flexible board (CN102).

SLED MOTOR ASSY (251) (M101), OPTICAL PICK-UP (KSS-720A)

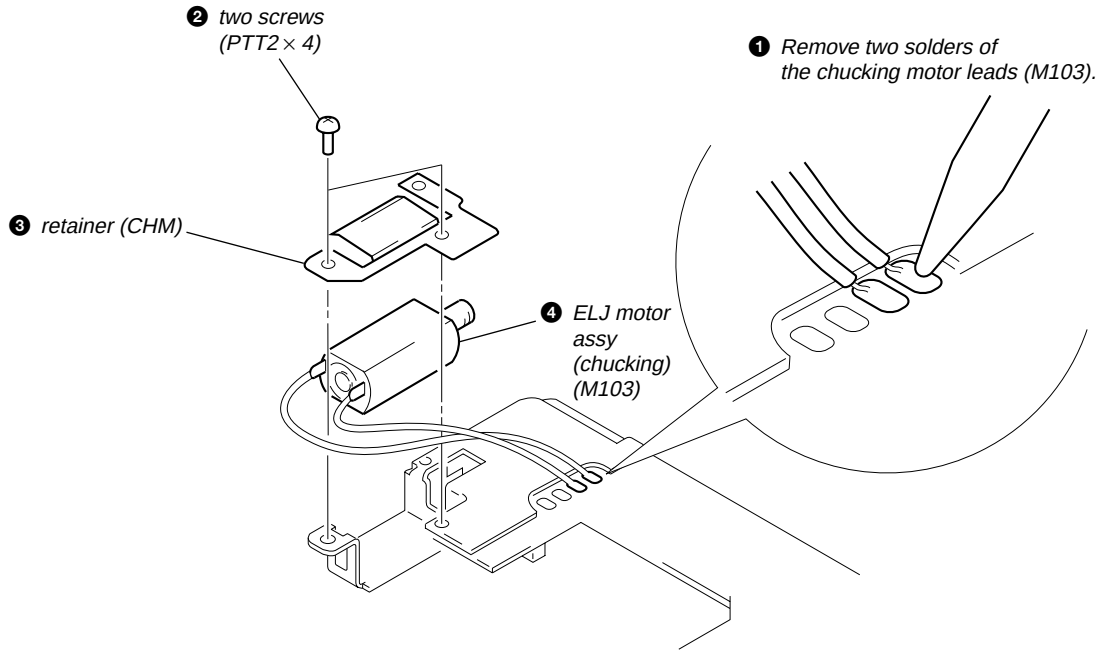

❶ two precision screws (P2 × 3)
❷ sled motor assy (251) (M101)
❹ Turn shaft (feed) assy in the direction of the arrow, then remove it.
OP flexible board
adhesive sheet
optical pick-up
❸ optical pick-up (KSS-720A)

Note: After connecting OP flexible board, fix it with adhesive sheet to optical pick-up.

LSW BOARD, SPINDLE MOTOR (S) SUB ASSY (M102)


❽ two precision screws (P1.7 × 2.2)
❼
❸ spring (chucking)
❻ retainer (disc)
❹ precision screw (P2 × 2.2)
❺ bracket (CP)
❶ precision screw (P2 × 2.5)
❷ LSW board
❾ Remove the spindle motor (S) sub assy (M102) in the direction of the arrow.

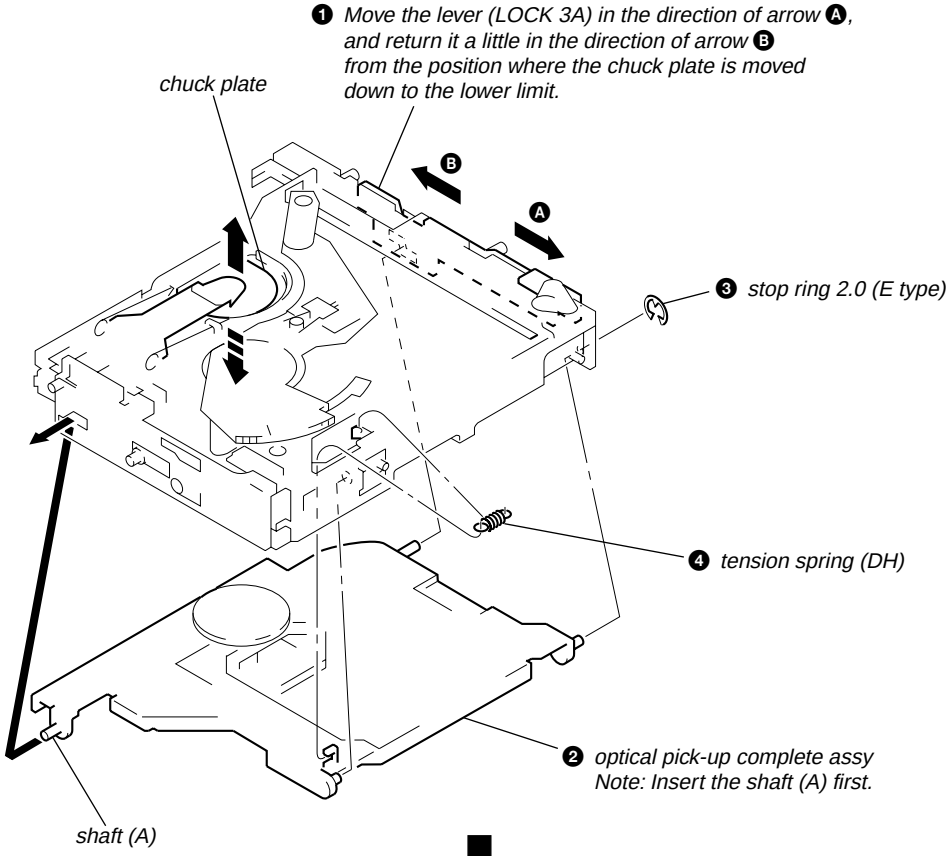
ELJ MOTOR ASSY (CHUCKING) (M103)



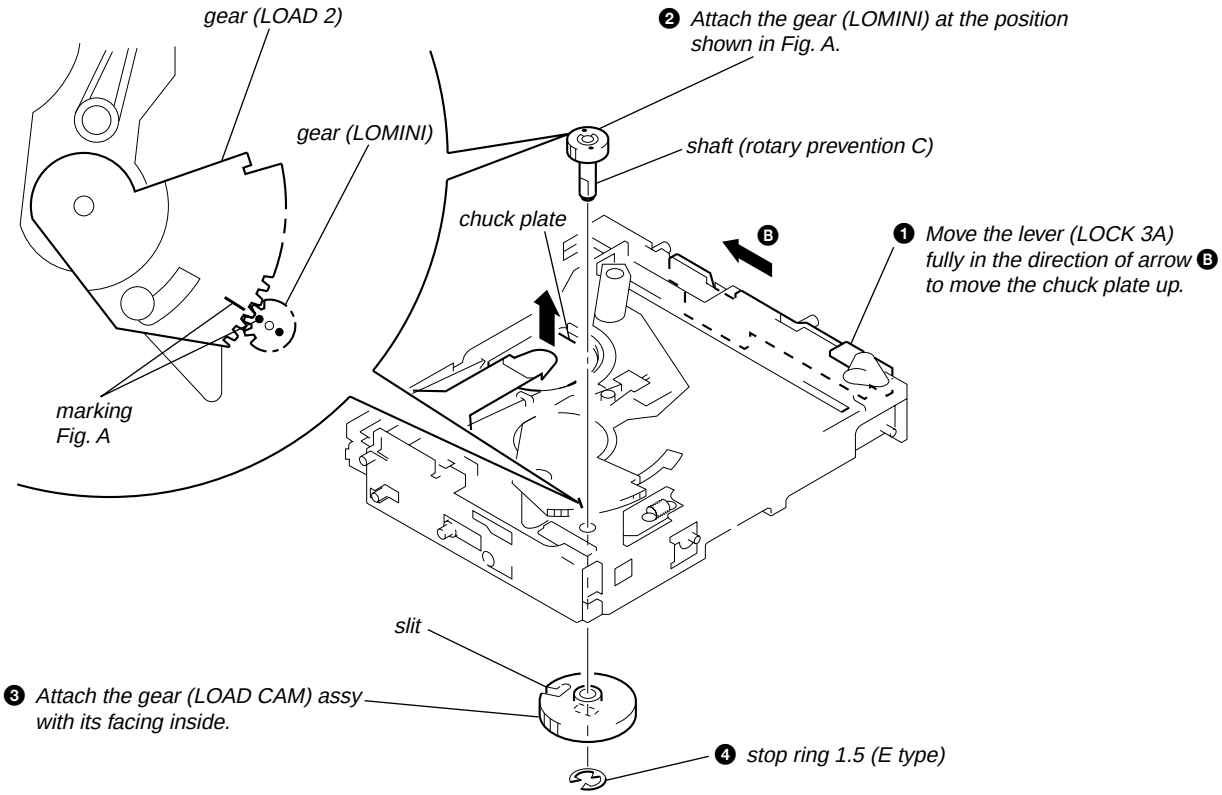
SECTION 3
MECHANISM DECK ASSEMBLY

Note: Follow the assembly procedure in the numerical order given.

OPTICAL PICK-UP COMPLETE ASSY

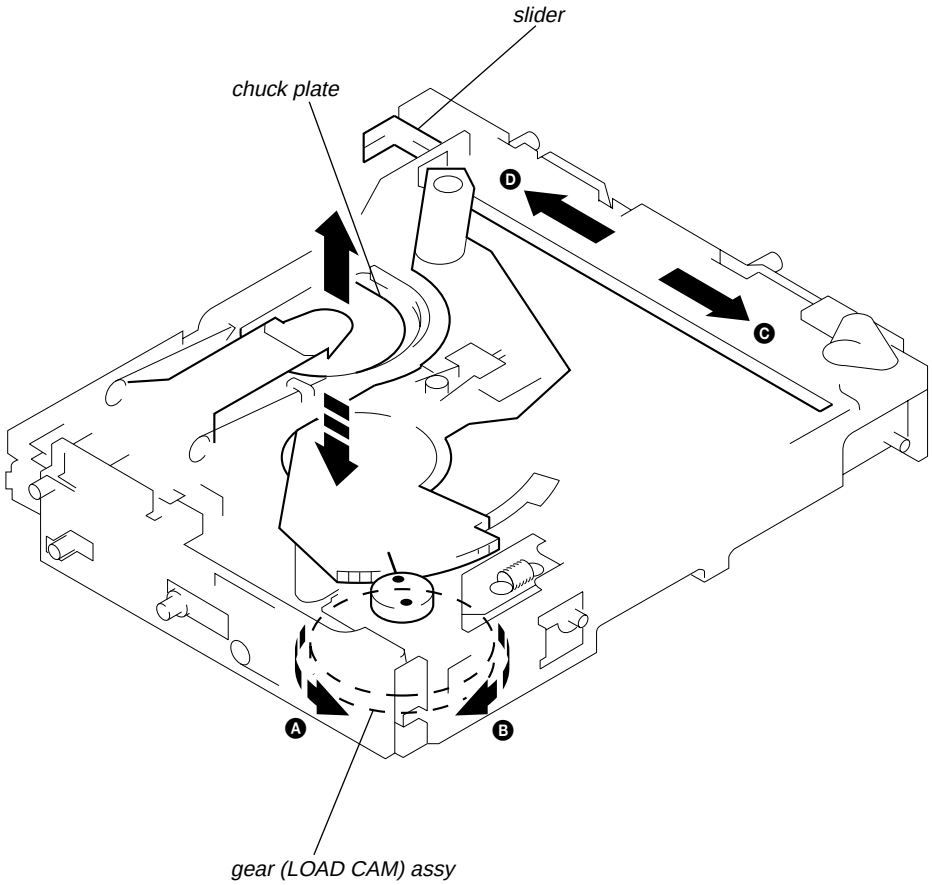

❶ Move the lever (LOCK 3A) in the direction of arrow Ⓐ, and return it a little in the direction of arrow Ⓑ from the position where the chuck plate is moved down to the lower limit.
chuck plate
Ⓑ
Ⓐ
❸ stop ring 2.0 (E type)
❹ tension spring (DH)
❷ optical pick-up complete assy
Note: Insert the shaft (A) first.
shaft (A)

GEAR (LOMINI)/(LOAD CAM) ASSY


gear (LOAD 2)
gear (LOMINI)
marking
Fig. A
❷ Attach the gear (LOMINI) at the position shown in Fig. A.
shaft (rotary prevention C)
chuck plate
Ⓑ
❶ Move the lever (LOCK 3A) fully in the direction of arrow Ⓑ to move the chuck plate up.
slit
❸ Attach the gear (LOAD CAM) assy with its facing inside.
❹ stop ring 1.5 (E type)

OPERATION CHECK

❶ *Confirm that the slider moves in the direction of arrow Ⓒ to move down the chuck plate if the gear (LOAD CAM) is rotated in the direction of arrow Ⓐ or the chuck plate moves up and the slider moves in the direction of arrow Ⓓ if the gear is rotated in the direction of arrow Ⓑ.*

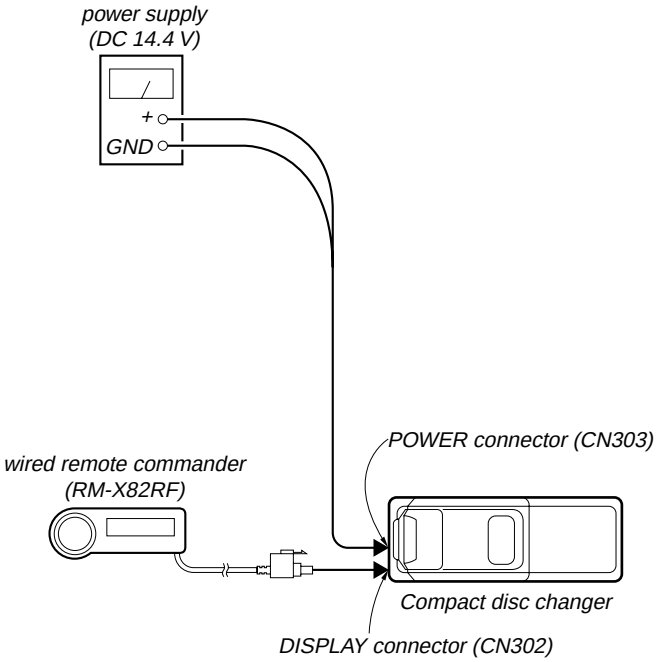


SECTION 4
MECHANICAL ADJUSTMENTS

• Elevator Height (Address) Adjustment

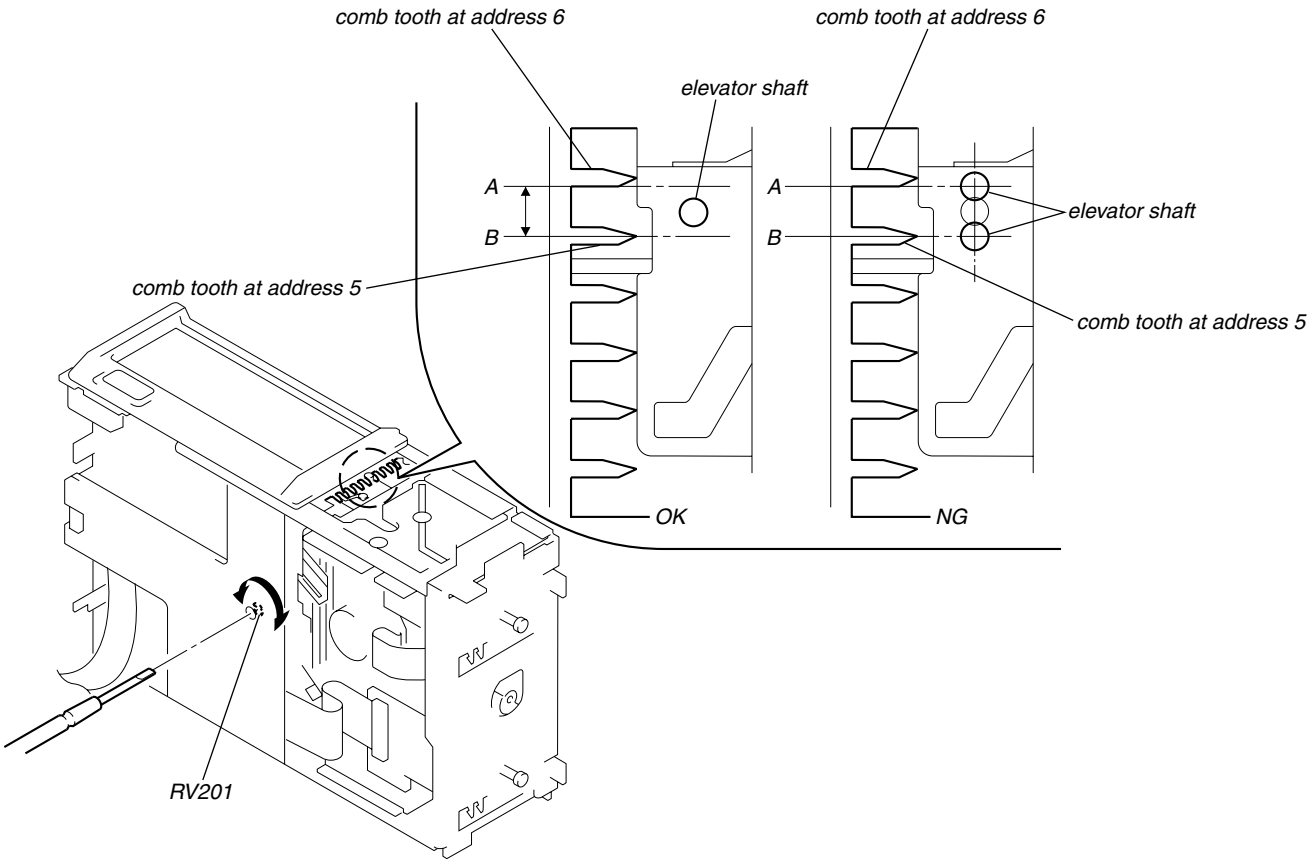
Note: This adjustments is necessary when the system controller (IC201), variable resistor (RV201), slider (R), slider (L), or chassis (ELV) was replaced for any repair.

Connection:



Adjustment Method:

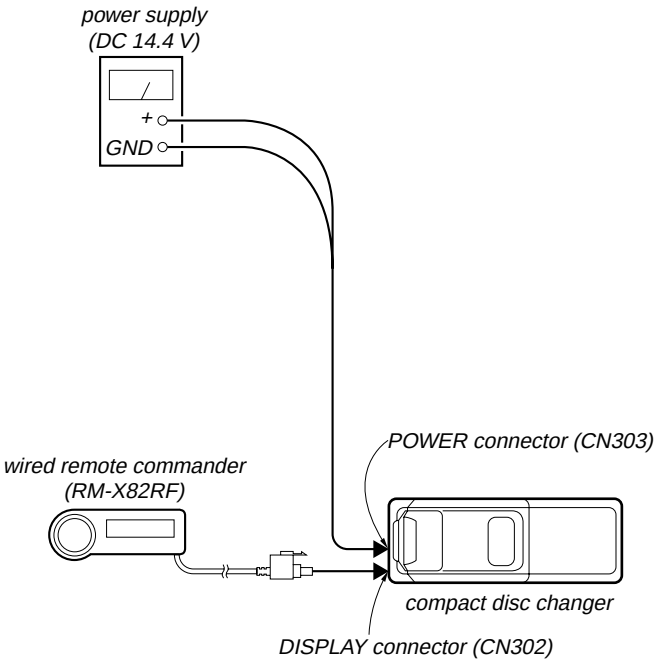
1. Load a disc magazine, and place the set vertically as shown below.
2. Connect the regulated power supply, and turn the power on.
3. Press the DISC button on the wired remote commander (RM-X82RF) and select DISC 5.
4. At this time, if the elevator shaft does not position between comb teeth A and B at addresses 5 and 6 as shown below, adjust the following.
5. Press repeatedly the DISC + and – buttons on the wired remote commander (RM-X82RF) so that the elevator shafts moves from address 6 to address 5, or from 5 to 6. At this time, adjust RV201 on the main board so that the elevator shaft positions smoothly between comb teeth A and B.
6. Further, place the set horizontally and make same adjustment as mentioned above.
7. After adjustment at addresses 5 to 6 is finished, check all operations from addresses 1 to 10 with the set placed vertically and horizontally respectively to confirm that the elevator shaft positions in a range between comb teeth A to B.



SECTION 5
ELECTRICAL CHECK

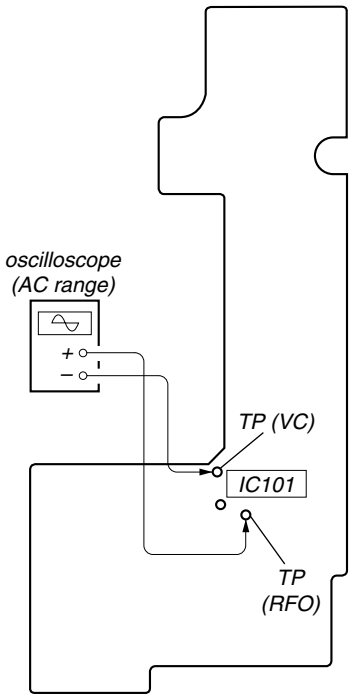
Note:
1. This adjustment is performed with the set placed horizontally.
2. Power supply voltage: DC14.4 V (more than 3 A).
3. Be sure to use the disc "YEDS-18" parts code: 3-702-101-01, but only when indicated.

Connection:



FOCUS BIAS CHECK

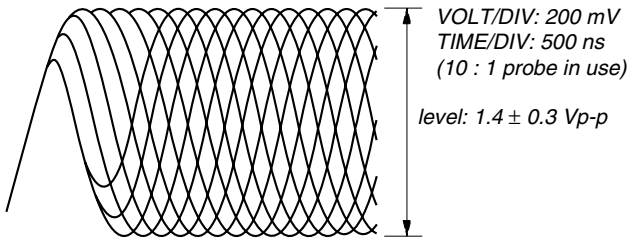
Connection:
– RF BOARD (Component Side) –



Procedure:
1. Connect the oscilloscope to TP (RFO) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc (YEDS-18).
3. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note:
Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

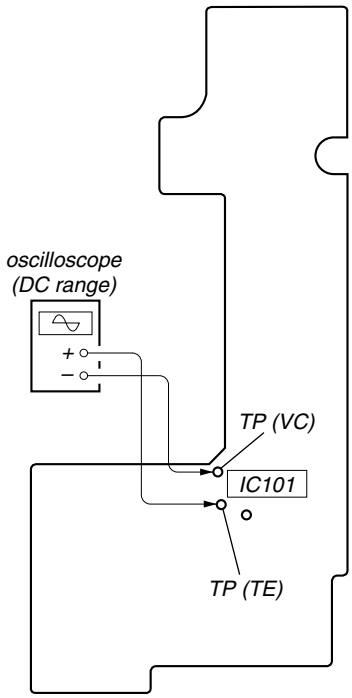
RF signal waveform



When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

TRACKING OFFSET CHECK

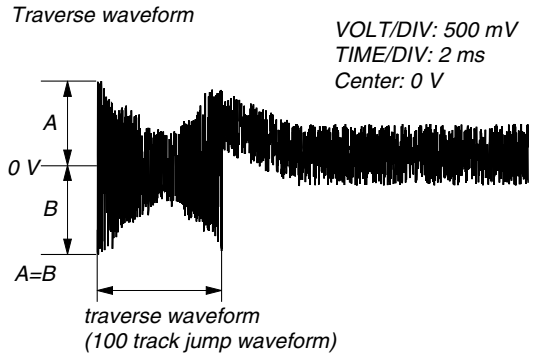
Connection:
– RF BOARD (Component Side) –



Procedure:

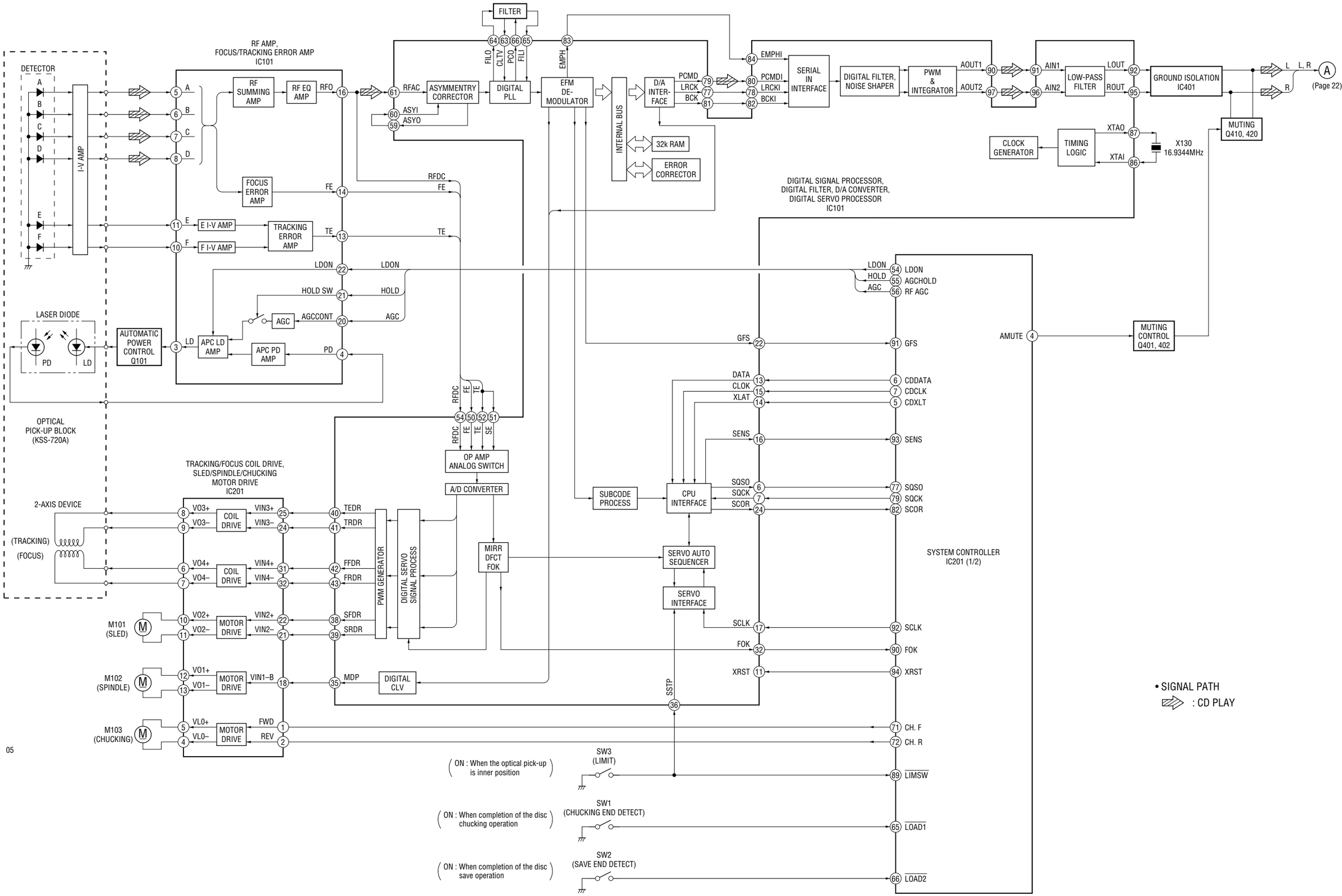
1. Connect the oscilloscope to TP (TE) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc (YEDS-18).
3. Rotate the |◀◀ AMS ▶▶| dial on the wired remmote commander, and check the traverse waveform*.
4. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V dc, and check this level.

* Traverse waveform: This is the tracking error wave form appears when crossing the track.

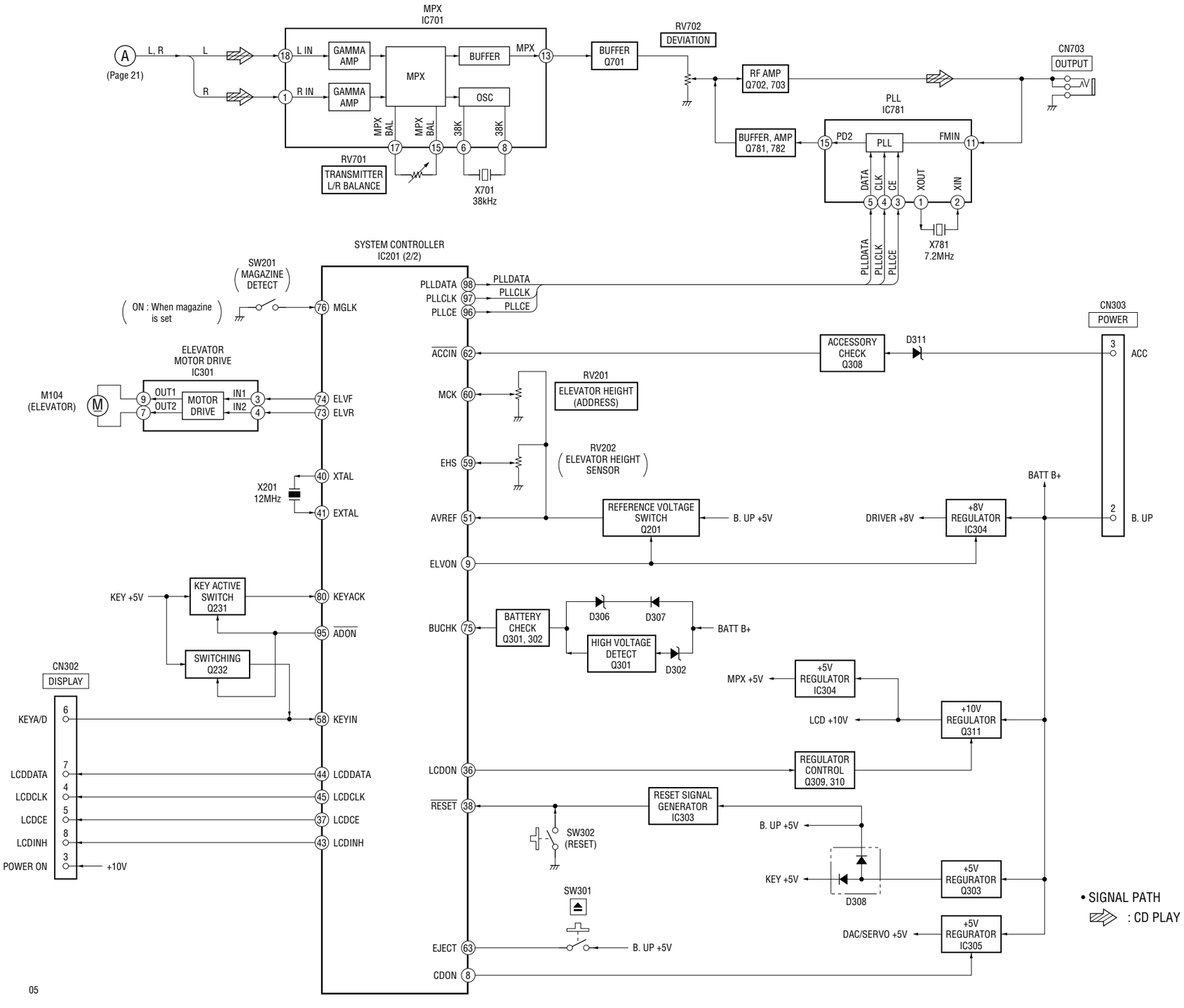


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM – SERVO Section –



6-2. BLOCK DIAGRAM – MAIN Section –



6-3. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⊡← : indicates side identified with part number.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

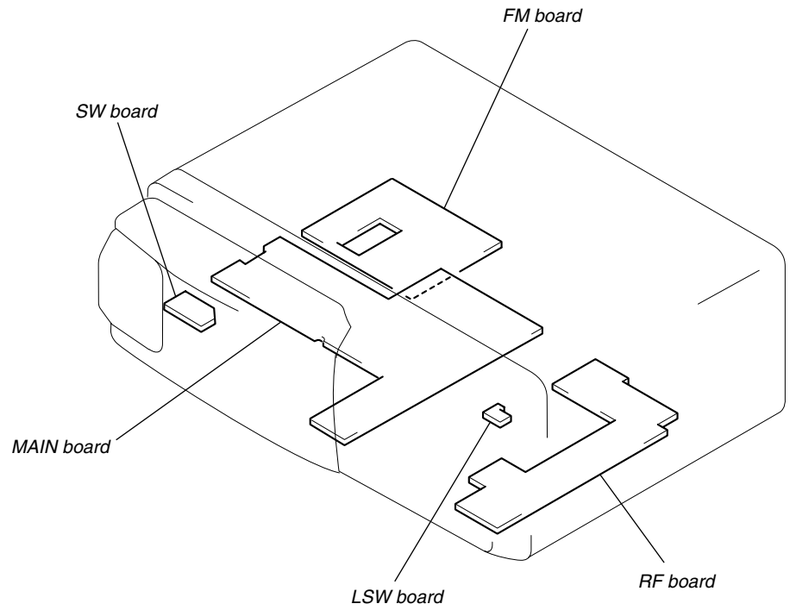
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- ▬ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from CD changer controller.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY

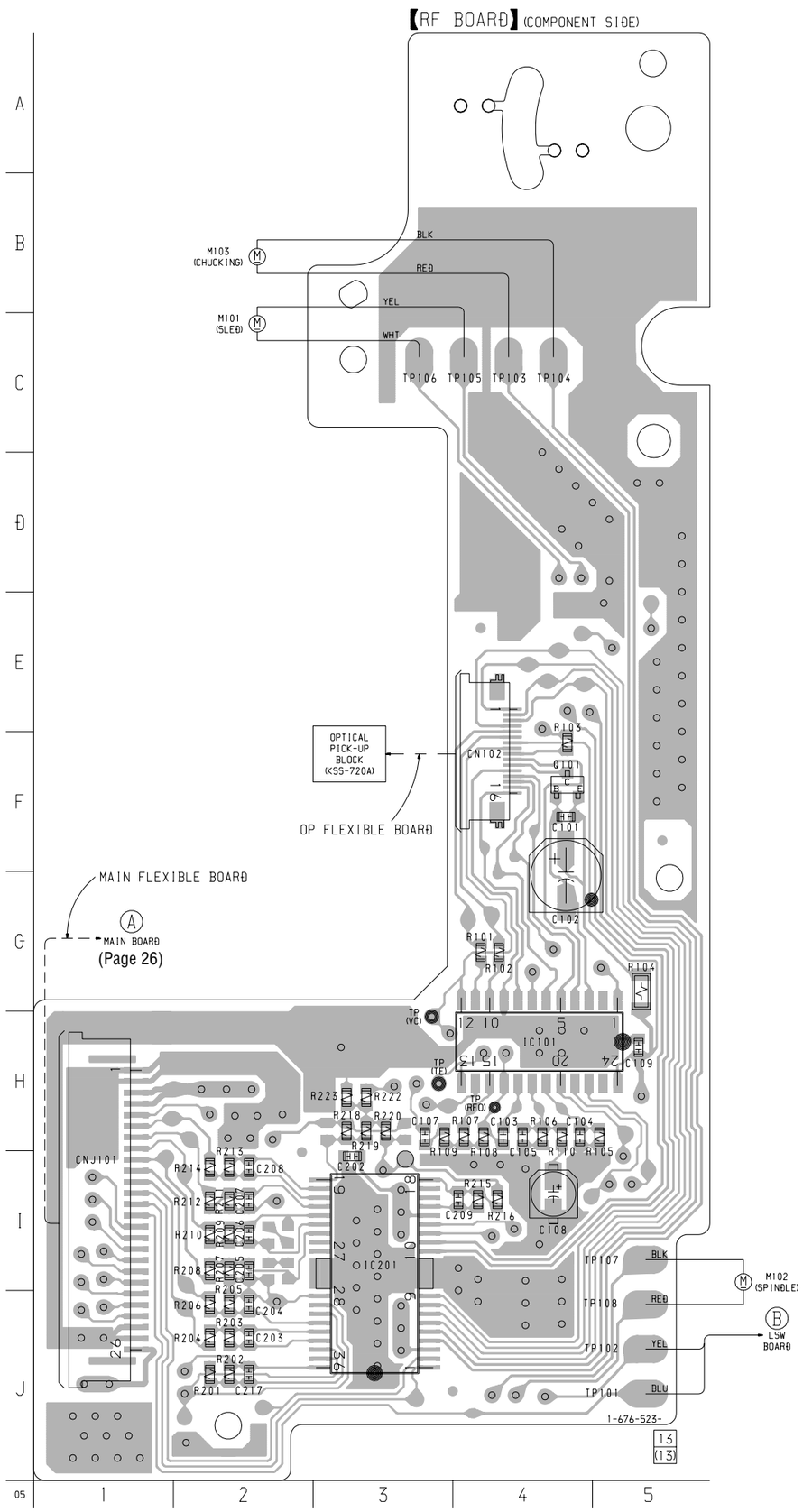
- **Circuit Boards Location**

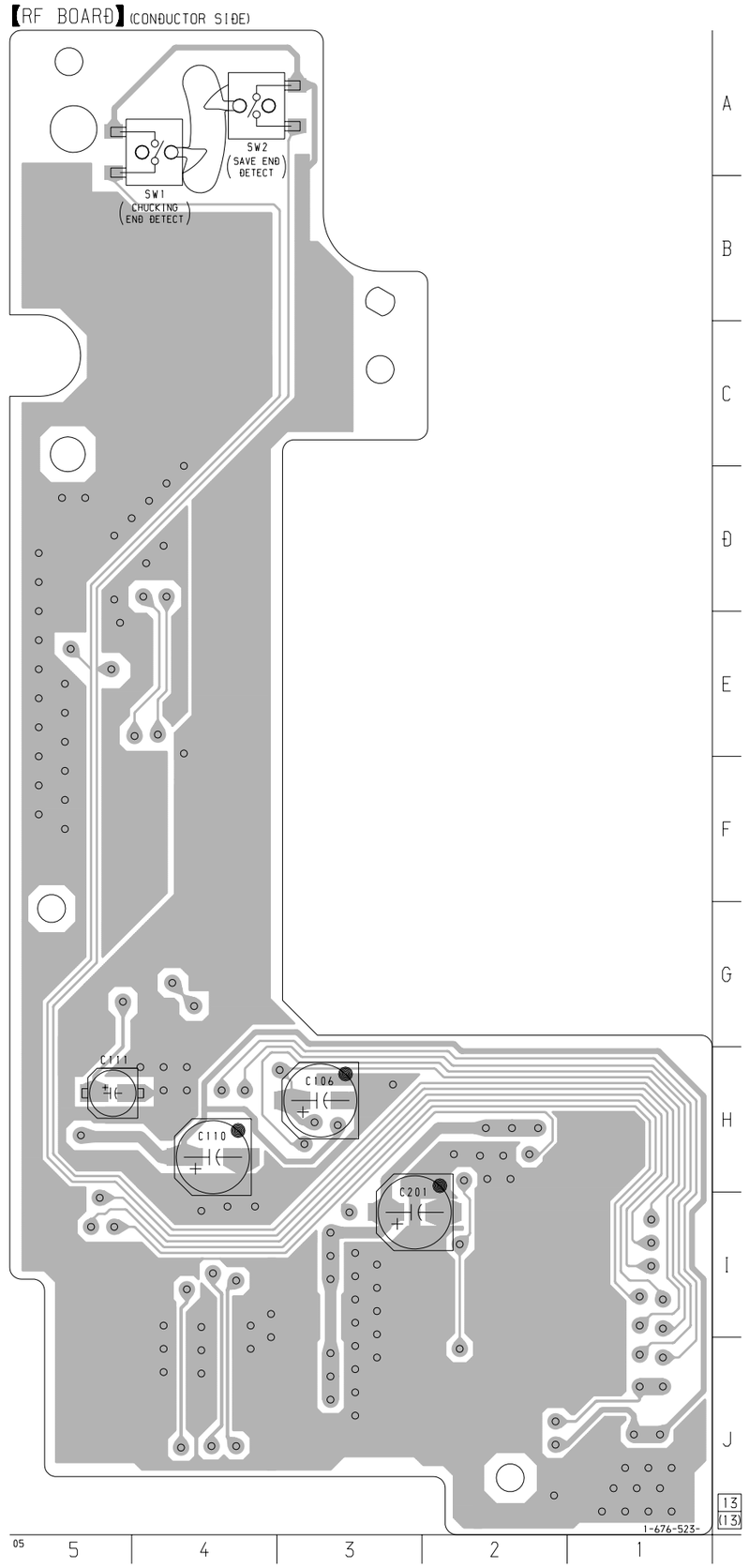


6-4. PRINTED WIRING BOARDS – RF/LSW Boards – • See page 23 for Circuit Boards Location.

- **Semiconductor Location**

Ref. No.	Location
IC101	H-4
IC201	I-3
Q101	F-4





【RF BOARD】

【LSW BOARD】

⚠ OPTICAL PICK-UP BLOCK (KSS-720A)

2-AXIS DEVICE
(FOCUS)
(TRACKING)
LASER DIODE
PD
LD
I-V AMP
VCC
VC
DETECTOR

OP FLEXIBLE BOARD

CN102 16P

F (–)	1
T (+)	2
T (–)	3
F (+)	4
E	5
F	6
VCC	7
VC	8
VR	9
PD	10
LD	11
GND	12
A	13
C	14
B	15
D	16

F–
T+
T–
F+

Q101
AUTOMATIC POWER CONTROL
Q101 2SB624T1-BV345

IC101
RF AMP, FOCUS/TRACKING ERROR AMP
IC101 CXA2596M

HOLD
AGCVTH
LD
PD
A
B
C
D
VEE
F
E
VC
VCC
LC/PD
LDON
HOLD_SW
AGCCONT
RF_BOT
RFTC
RFI
RFO
REF
FE
TE

TP (RFO)
TP (TE)
TP (VC)

SW3 (LIMIT)
(ON:WHEN THE OPTICAL PICK-UP IS INNER POSITION)

TP101 L_SW (+)
TP102 L_SW (–)

IC201 LA6576

FWD
REV
VCC2
VLO–
VLO+
VO4+
VO4–
VO3+
VO3–
VO2+
VO2–
VO1+
VO1–
VCC1
VIN1
VIN1–A
VIN1+A
VIN1–B
S–GND
MUTE2
MUTE1
VIN4–
VIN4+
VREF–IN
VIN1–SW
VREF–OUT
REG–OUT
REG–IN
VIN3+
VIN3–
VIN3
VIN2+
VIN2–
VIN2
VIN1+B

IC201
TRACKING/FOCUS COIL DRIVE, SLED/SPINDLE/CHUCKING MOTOR DRIVE

M103 (CHUCKING)
TP104 LD–
TP103 LD+

M101 (SLED)
TP105 SL+
TP106 SL–
TP107 SP–
TP108 SP+

M102 (SPINDLE)

SW2
(SAVE END DETECT)
(ON:WHEN COMPLETION OF THE DISC SAVE OPEREATION)

SW1
(CHUCKING END DETECT)
(ON:WHEN COMPLETION OF THE DISC CHUCKING OPEREATION)

CNJ101 26P
GND
+8V
MDP
SRDR
SFDR
TRDR
TFDR
FFDR
FRDR
REV
FWD
LIM.SW
LOAD2
LOAD1
AGCCONT
HOLD_SW
LDON
VC
FE
TE
RF
+5V

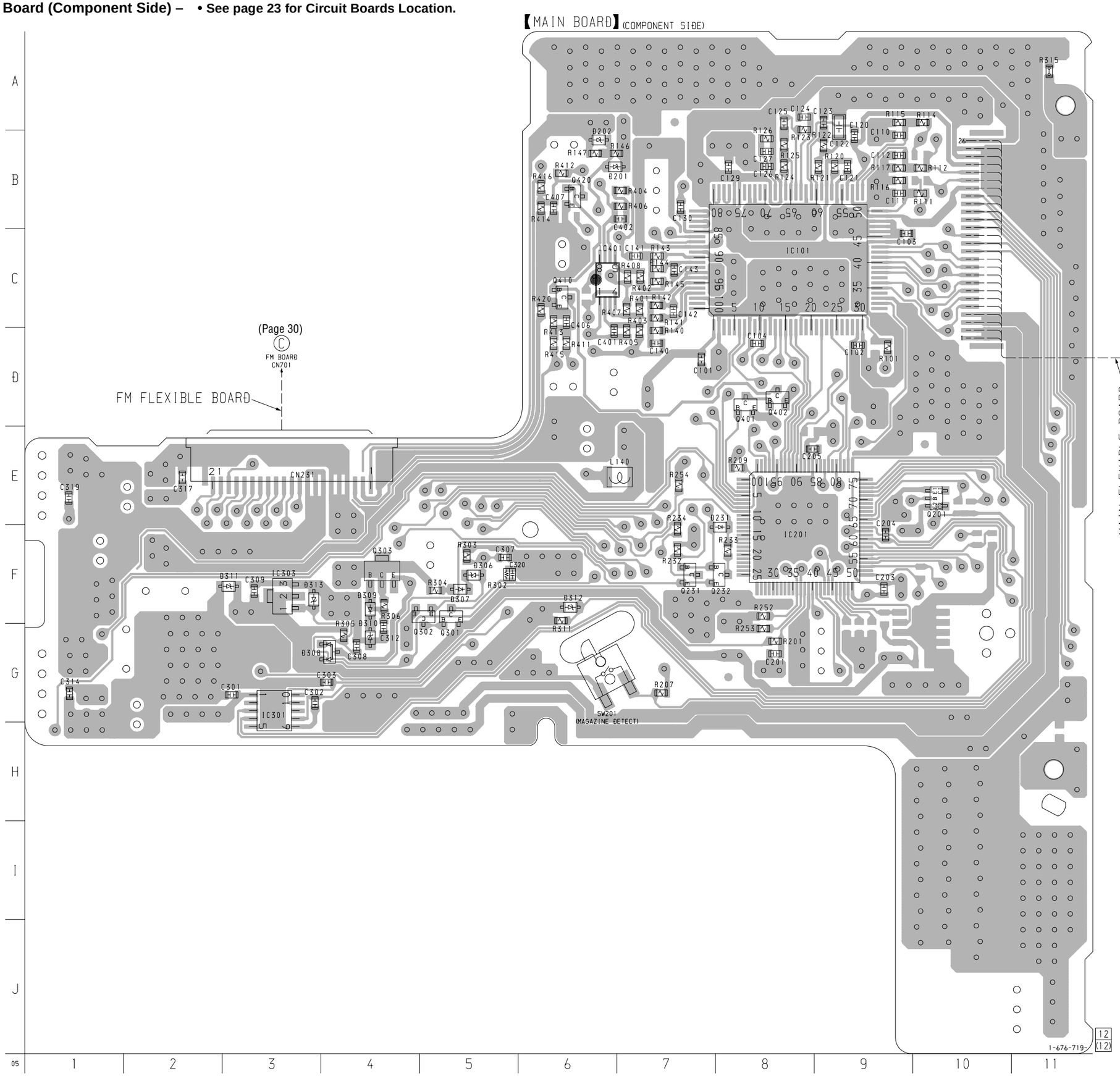
MAIN FLEXIBLE BOARD
A
MAIN BOARD (1/2)
(Page 28)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-6. PRINTED WIRING BOARDS – MAIN Board (Component Side) – • See page 23 for Circuit Boards Location.

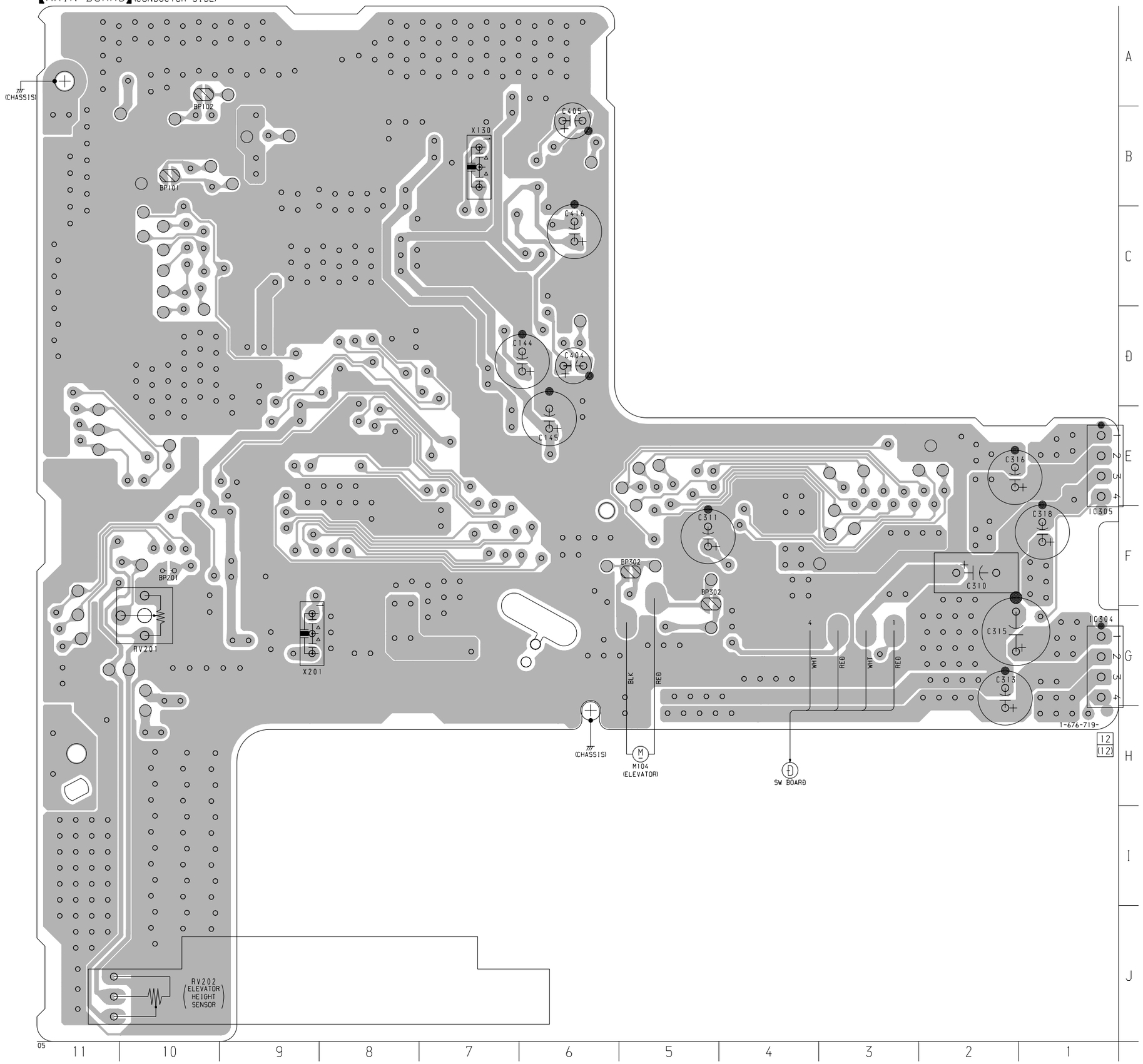
- **Semiconductor Location**

Ref. No.	Location
D201	B-6
D202	B-6
D231	F-8
D306	F-5
D307	F-5
D308	G-4
D309	F-4
D310	G-4
D311	F-3
D312	F-6
D313	F-3
IC101	C-8
IC201	F-8
IC301	G-3
IC303	F-3
IC401	C-6
Q201	E-10
Q231	F-7
Q232	F-8
Q301	F-5
Q302	F-5
Q303	F-4
Q401	D-8
Q402	D-8
Q410	C-6
Q420	B-6



6-7. PRINTED WIRING BOARDS – MAIN (Conductor Side)/SW Boards – • See page 23 for Circuit Boards Location.

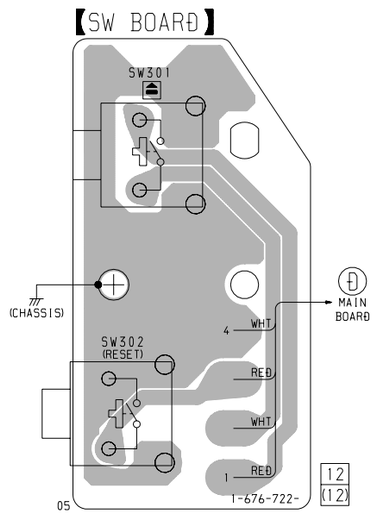
【MAIN BOARD】(CONDUCTOR SIDE)



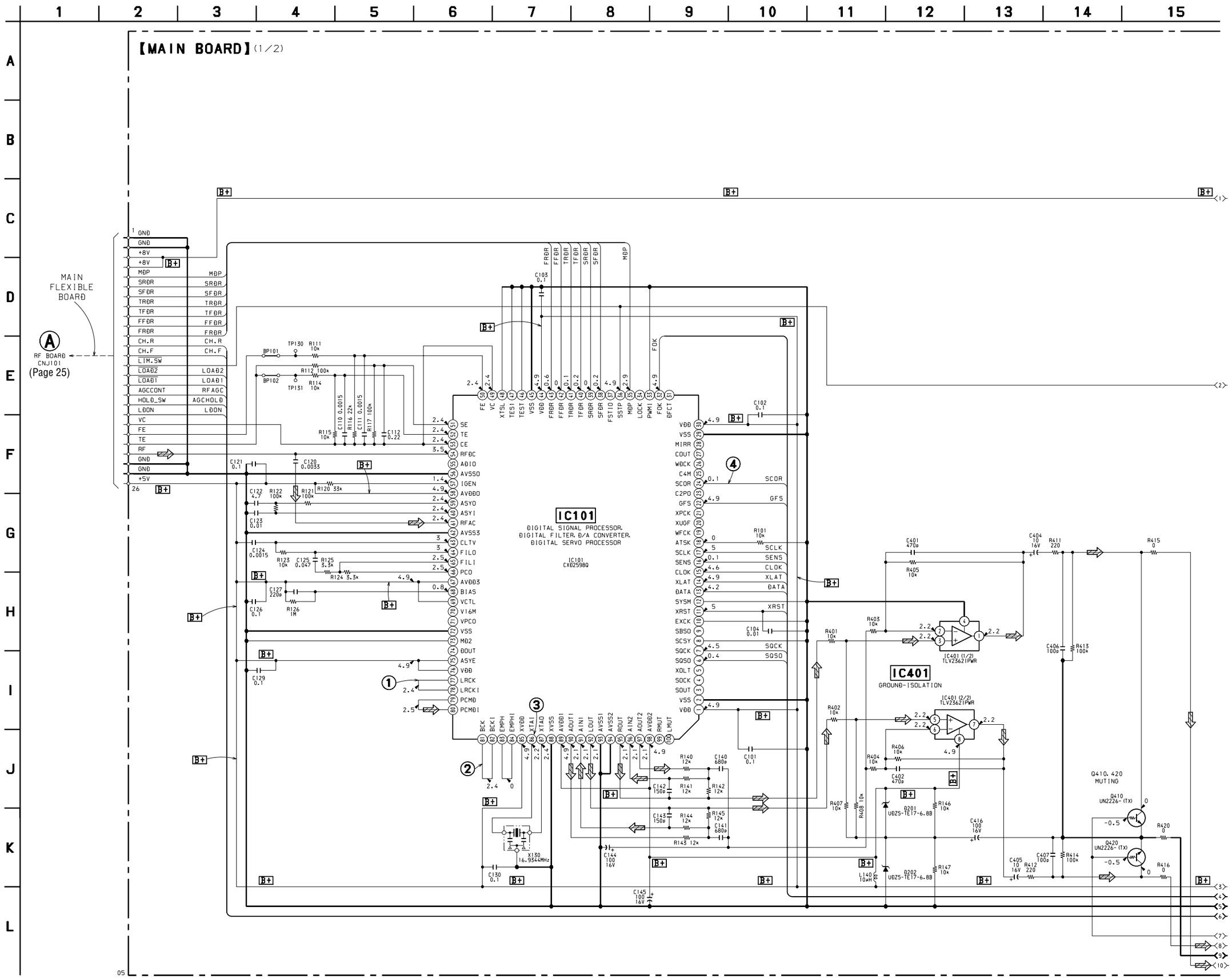
- **Semiconductor Location**

Ref. No.	Location
IC304	G-1
IC305	E-1

【SW BOARD】

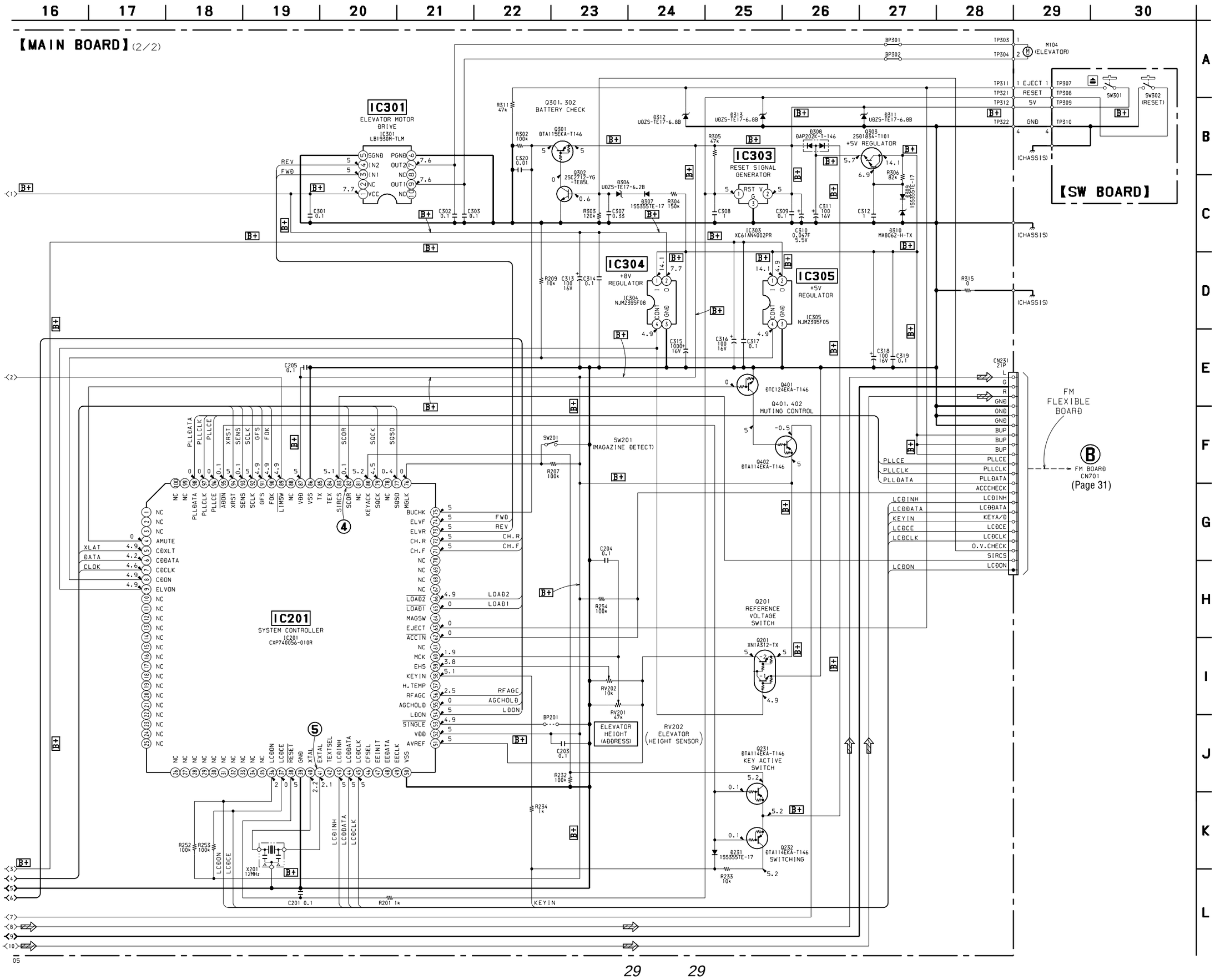


6-8. SCHEMATIC DIAGRAM – MAIN Board (1/2) – • See page 32 for Waveforms.

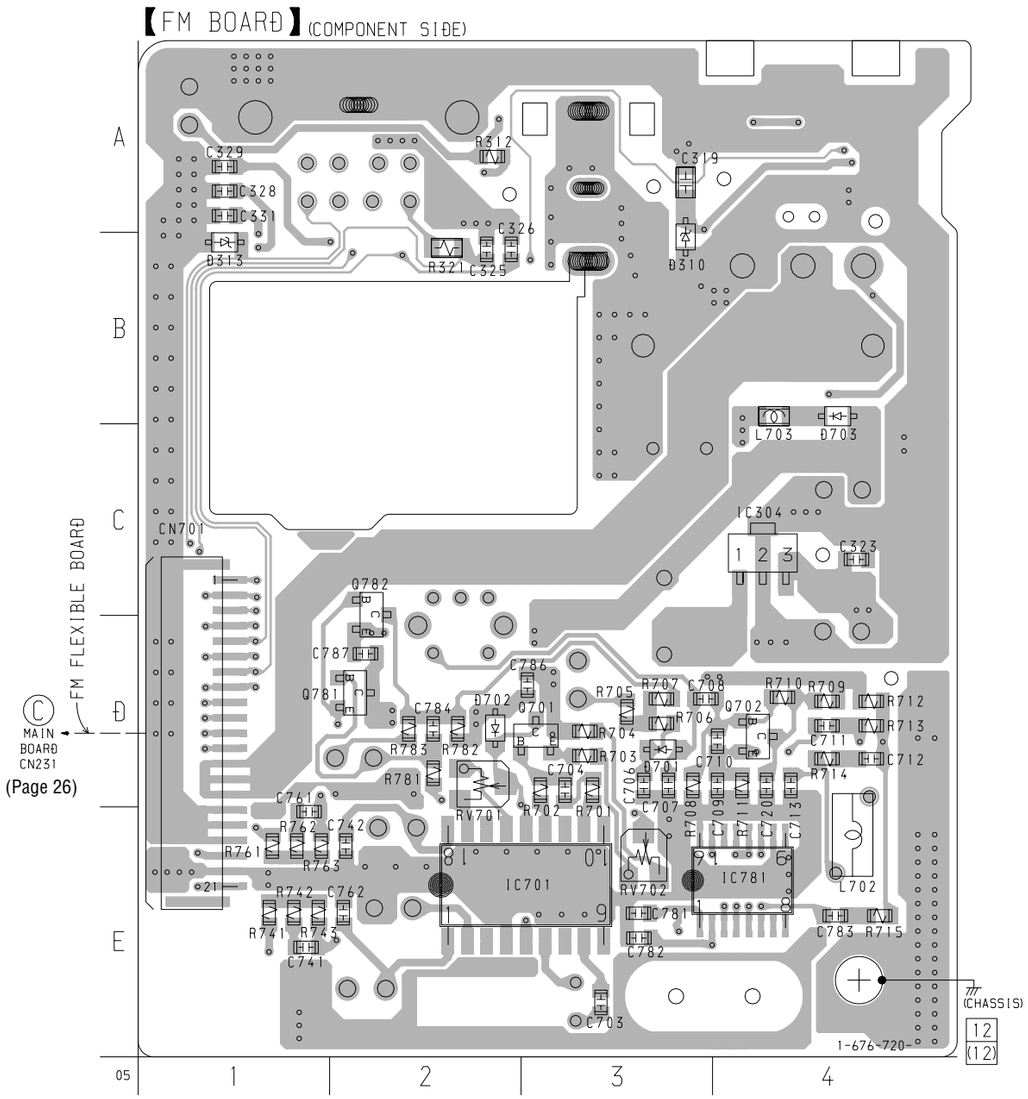


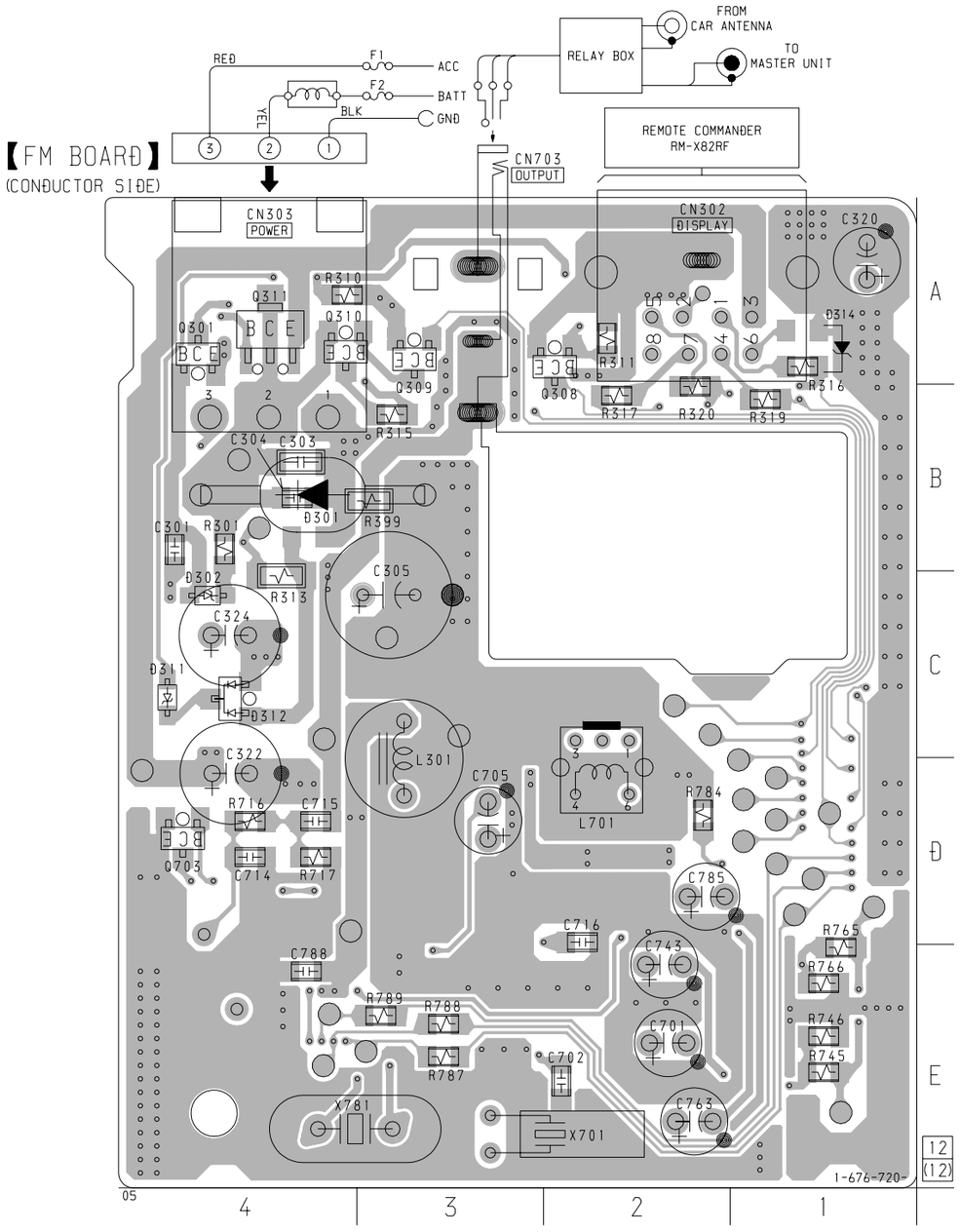
6-9. SCHEMATIC DIAGRAM – MAIN (2/2)/SW Boards –

• See page 32 for Waveforms. • See page 32 for IC Block Diagrams.



6-10. PRINTED WIRING BOARDS – FM Board – • See page 23 for Circuit Boards Location.





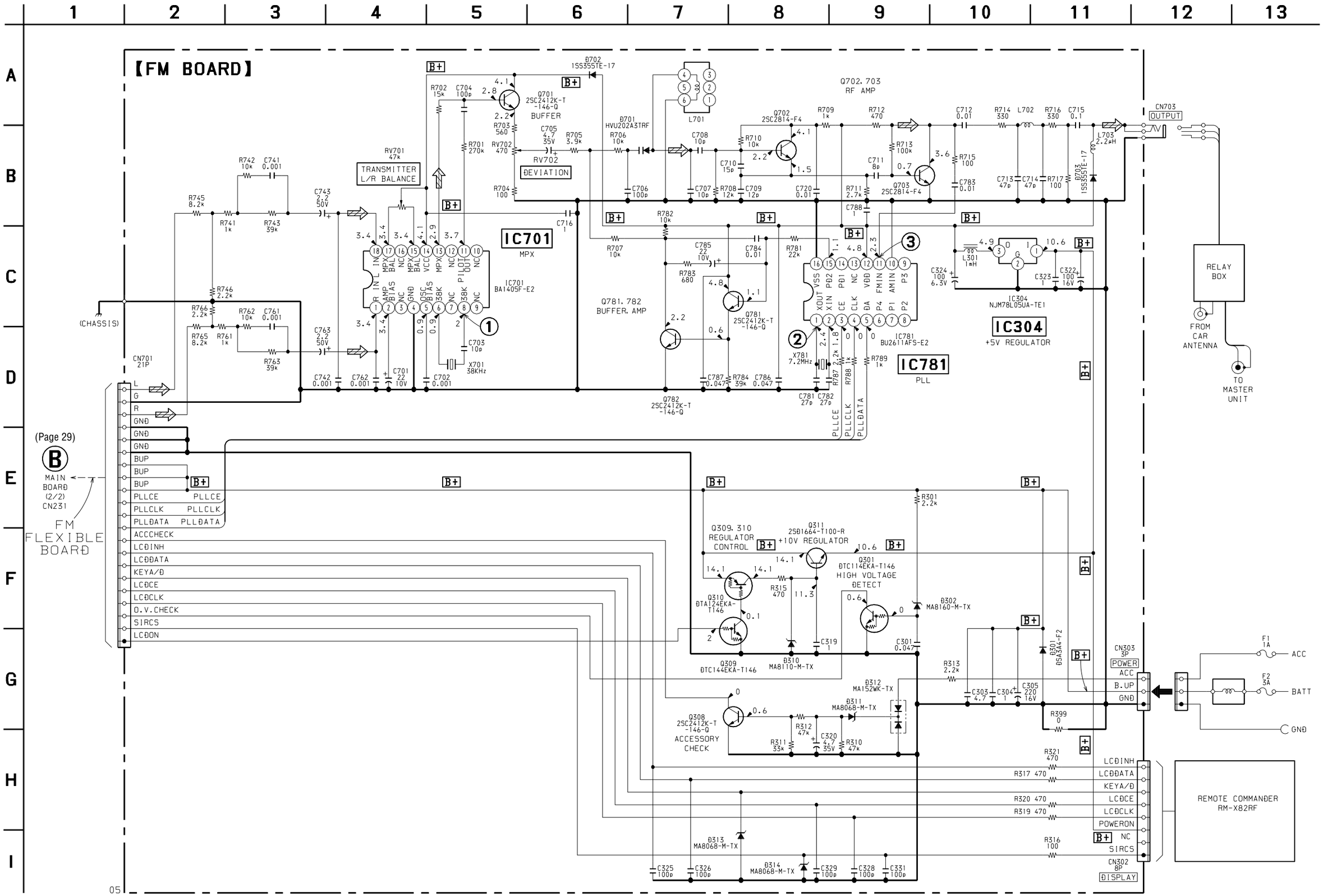
- **Semiconductor Location**

Ref. No.	Location
D310	B-3
D313	B-1
D701	D-3
D702	D-2
D703	B-4
IC304	C-4
IC701	E-3
IC781	E-4
Q701	D-3
Q702	D-4
Q781	D-2
Q782	C-2

- **Semiconductor Location**

Ref. No.	Location
D301	B-4
D302	C-4
D311	C-4
D312	C-4
D314	A-1
Q301	A-4
Q308	A-2
Q309	A-3
Q310	A-4
Q311	A-4
Q703	D-4

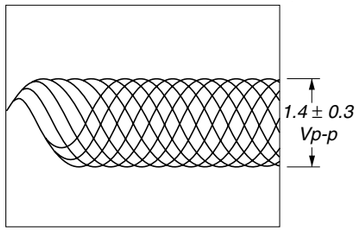
6-11. SCHEMATIC DIAGRAM – FM Board – • See page 32 for Waveforms. • See page 32 for IC Block Diagrams.



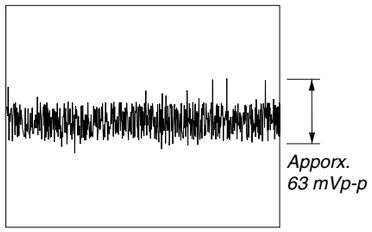
• Waveforms

– RF Board –

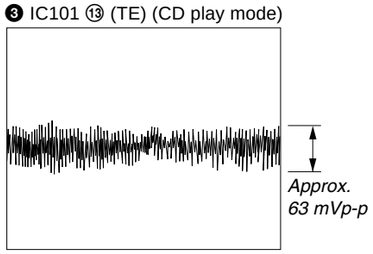
❶ IC101 ⑯ (RFO) (CD play mode)



❷ IC101 ⑭ (FE) (CD play mode)

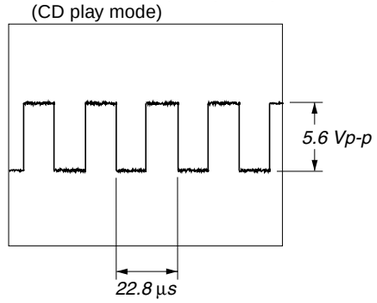


❸ IC101 ⑬ (TE) (CD play mode)

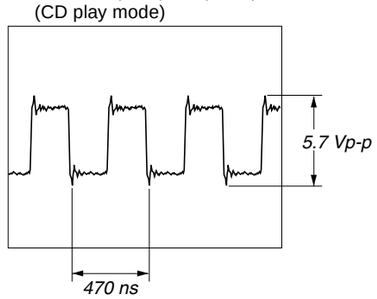


– MAIN Board –

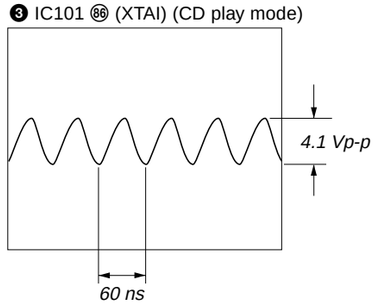
❶ IC101 ㊼ (LRCK), ㊽ (LRCKI) (CD play mode)



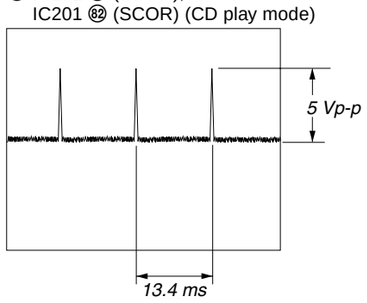
❷ IC101 ㊶ (BCK), ㊷ (BCKI) (CD play mode)



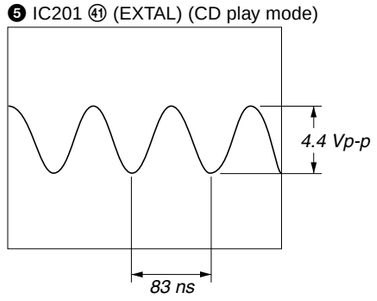
❸ IC101 ㊻ (XTAI) (CD play mode)



❹ IC101 ㉔ (SCOR), IC201 ㊷ (SCOR) (CD play mode)

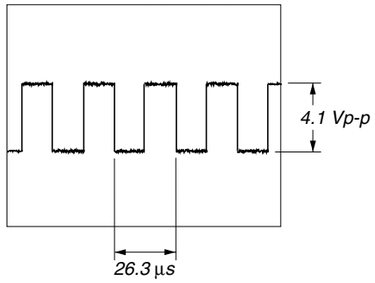


❺ IC201 ㊶ (EXTAL) (CD play mode)

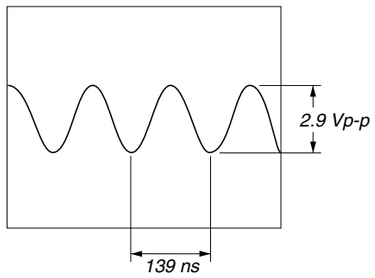


– FM Board –

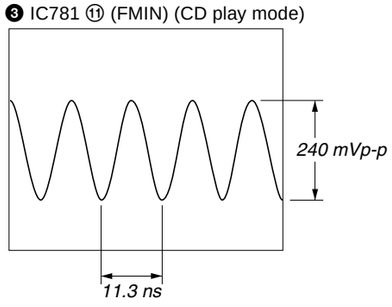
❶ IC701 ⑧ (38K) (CD play mode)



❷ IC781 ① (XOUT) (CD play mode)



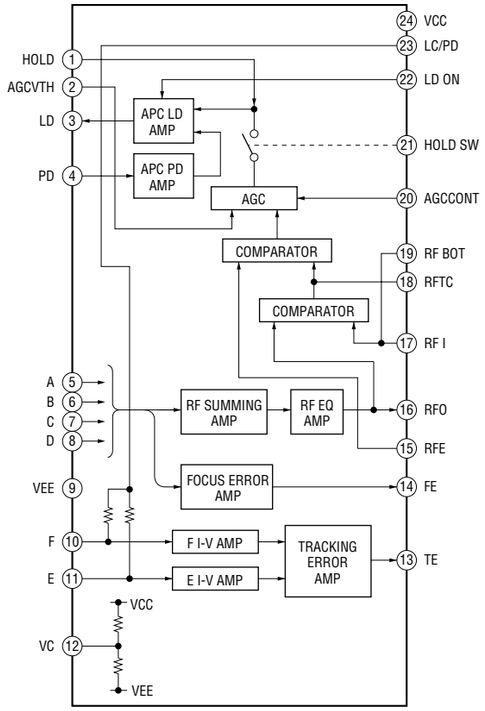
❸ IC781 ⑪ (FMIN) (CD play mode)



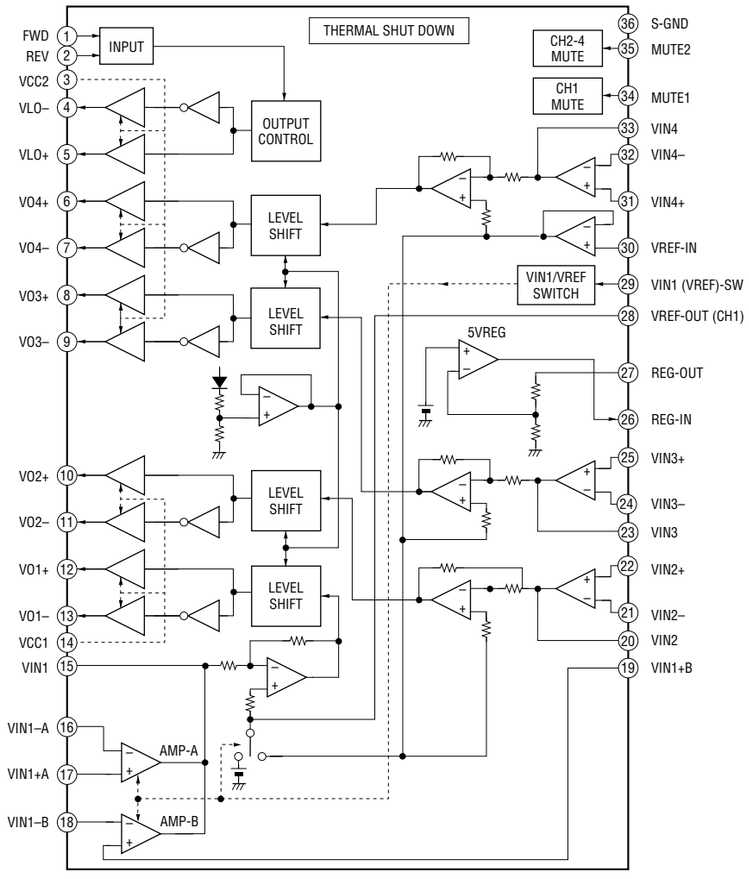
• IC Block Diagrams

– RF Board –

IC101 CXA2596M-T6

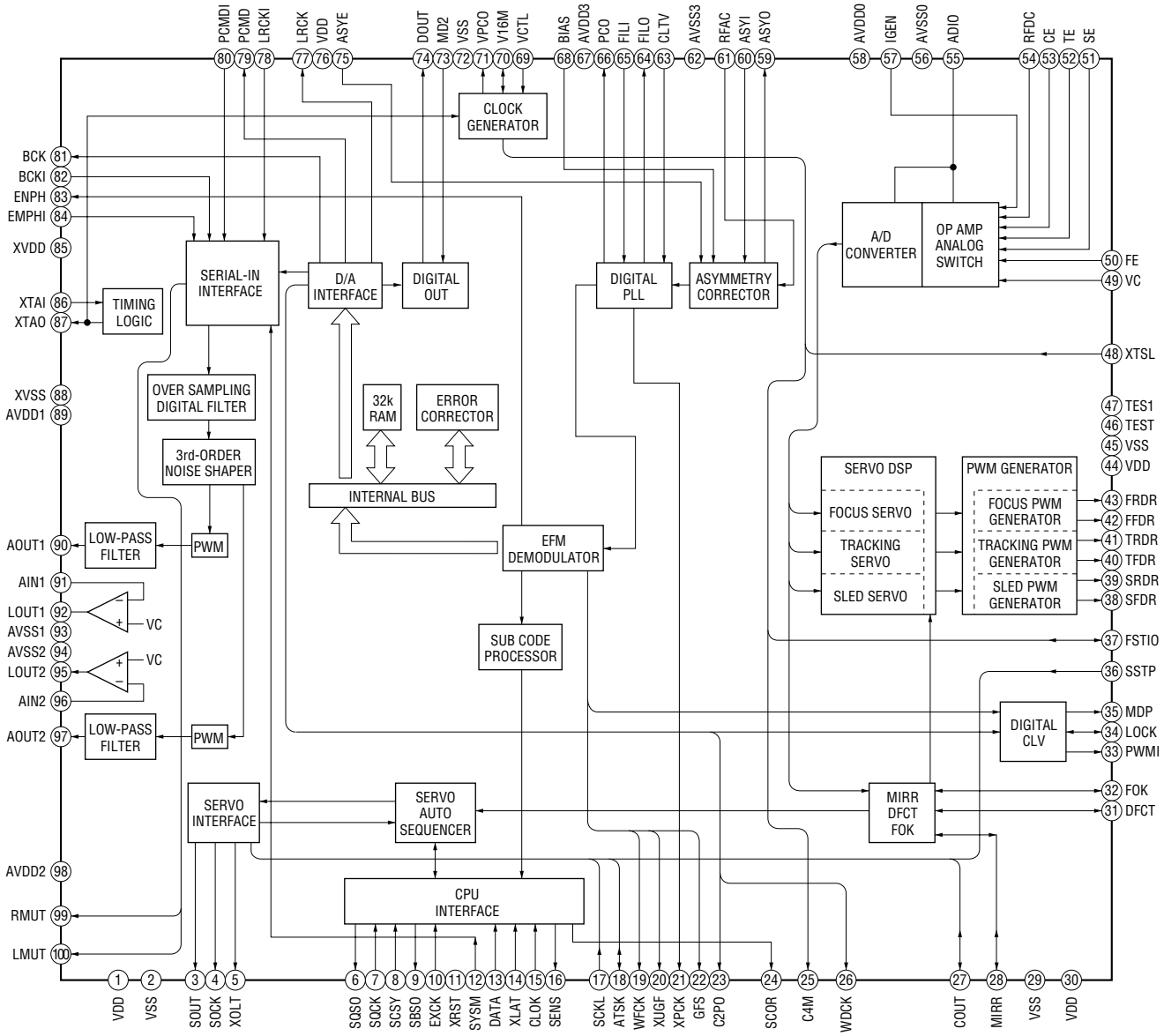


IC201 LA6576L-TE-L

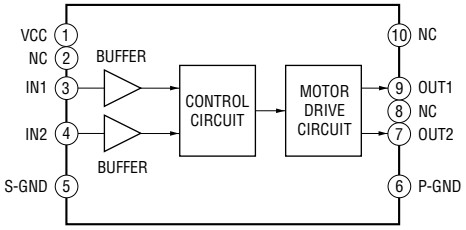


– MAIN Board –

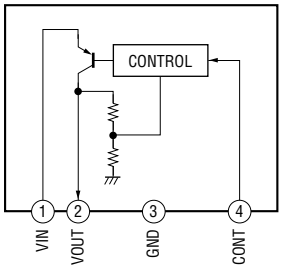
IC101 CXD2598Q



IC301 LB1930M-TLM

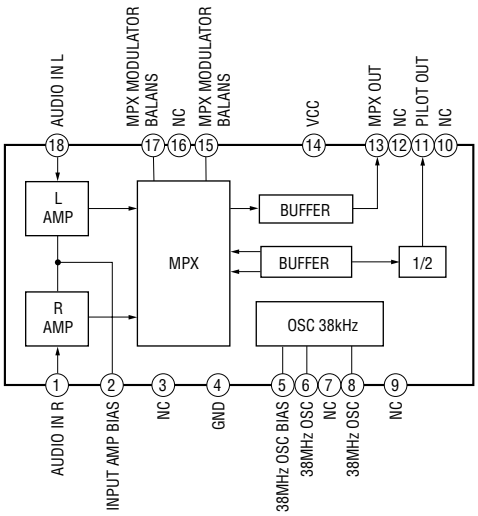


IC304 NJM2395F08
IC305 NJM2395F05

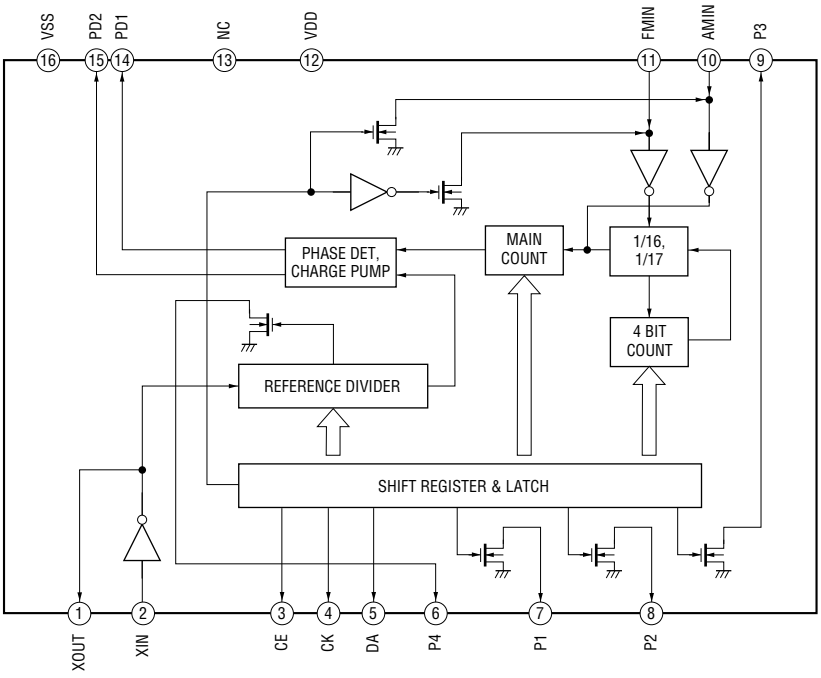


– FM Board –

IC701 BA1405F-E2



IC781 BU2611AFS-E2



6-12. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC201 CXP740056-010R (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 3	NC	—	Not used (open)
4	AMUTE	O	Audio line muting on/off control signal output "H": muting on
5	CDXLT	O	Serial data latch pulse signal output to the CXD2598Q (IC101)
6	CDDATA	O	Serial data output to the CXD2598Q (IC101)
7	CDCLK	O	Serial data transfer clock signal output to the CXD2598Q (IC101)
8	CDON	O	D/A converter and servo section power supply on/off control signal output "H": power on
9	ELVON	O	Mechanism deck section power supply on/off control signal output "H": power on
10 to 35	NC	—	Not used (open)
36	LCDON	O	The LCD in remote commander and FM transmitter section power supply on/off control signal output "H": power on
37	LCDCE	O	Chip enable signal output to the LCD driver in remote commander
38	$\overline{\text{RESET}}$	I	System reset signal input from the reset switch (SW302) and reset signal generator (IC303) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
39	GND	—	Ground terminal
40	XTAL	O	Main system clock output terminal (12 MHz)
41	EXTAL	I	Main system clock input terminal (12 MHz)
42	TEXTSEL	I	CD text mode setting terminal "L": CD text on, "H": does not display track name Not used (open)
43	LCDINH	O	Inhibit signal output to the LCD driver in remote commander
44	LCDDATA	O	Serial data output to the LCD driver in remote commander
45	LCDCLK	O	Serial data transfer clock signal output to the LCD driver in remote commander
46	CFSEL	I	Custom file on/off setting terminal "L" custom file on Not used (open)
47	EEINIT	I	Initialize signal input for the EEPROM "H": format Not used (open)
48	EEDATA	I/O	Two way data bus with the EEPROM Not used(open)
49	EECLK	O	Sirial data transfer clock signal output to the EEPROM Not used (open)
50	VSS	—	Ground terminal (for A/D converter)
51	AVREF	I	Reference voltage (+5V) input terminal (for A/D converter)
52	VDD	—	Power supply terminal (+5V) (for A/D converter)
53	$\overline{\text{SINGLE}}$	I	Setting terminal for the single disc/multiple discs mode "L": single mode, "H": multiple discs mode Not used (open)
54	LDON	O	The laser automatic power control on/off signal output "H": automatic power control on
55	AGCHOLD	O	RF AGC hold on/off signal output "H": hold on
56	RF AGC	O	RF AGC level control signal output "L ": off, center voltage : 40%, "H": 60%
57	H.TEMP	I	High temperature sensor input terminal Not used (open)
58	KEYIN	I	Key input terminal (A/D input) from the remote commander
59	EHS	I	Elevator height position detection signal input from the RV202 (elevator height sensor) (A/D input)
60	MCK	I	Input of signal for the fine adjustment (elevator height (address) adjustment; RV201) of elevator position (A/D input)
61	NC	—	Not used (open)
62	$\overline{\text{ACCIN}}$	I	Accessory detection signal input "L": accessory on
63	EJECT	I	Eject switch (SW301) input terminal "H" active
64	MAGSW	I	Magazine in/out detection switch input terminal Not used (open)
65	$\overline{\text{LOAD1}}$	I	Chucking end detect switch (SW1) input terminal "L": When completion of the disc chucking operation

Pin No.	Pin Name	I/O	Description
66	$\overline{\text{LOAD2}}$	I	Save end detect switch (SW2) input terminal “L”: When completion of the disc save operation
67 to 70	NC	—	Not used (open)
71	CH.F	O	Motor drive signal (save direction) output to the chucking motor drive (IC201) “L” active *1
72	CH.R	O	Motor drive signal (chucking direction) output to the chucking motor drive (IC201) “L” active *1
73	ELVR	O	Motor drive signal (elevator down direction) output to the elevator motor drive (IC301) “L” active *2
74	ELVF	O	Motor drive signal (elevator up direction) output to the elevator motor drive (IC301) “L” active *2
75	BUCHK	I	Battery detection signal input “H”: battery on
76	MGLK	I	Magazine detect switch (SW201) input terminal “L”: magazine is set
77	SQSO	I	Subcode Q/text serial data input from the CXD2598Q (IC101)
78	NC	—	Not used (open)
79	SQCK	O	Subcode Q/text serial data transfer clock signal output to the CXD2598Q (IC101)
80	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept from the remote commander in the power off status
81	NC	—	Not used (open)
82	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2598Q (IC101)
83	SIRCS	I	SIRCS signal input terminal Not used (open)
84	TEX	I	Sub system clock input terminal Not used (open)
85	TX	O	Sub system clock output terminal Not used (open)
86	VSS	—	Ground terminal
87	VDD	—	Power supply terminal (+5V)
88	NC	—	Not used (open)
89	$\overline{\text{LIMSW}}$	I	Sled limit in detect switch (SW3) input terminal “L”: When the optical pick-up is inner position
90	FOK	I	Focus OK signal input from the CXD2598Q (IC101) “H” is input when focus is on (“L”: NG)
91	GFS	I	Guard frame sync signal input from the CXD2598Q (IC101) “L”: NG, “H”: OK
92	SCLK	O	Serial data transfer clock signal output to the CXD2598Q (IC101)
93	SENS	I	Internal status signal (sense signal) input from the CXD2598Q (IC101)
94	XRST	O	System reset signal output to the CXD2598Q (IC101) “L”: reset
95	$\overline{\text{ADON}}$	O	Power supply on/off control signal output for the A/D converter “L”: power on
96	PLLCE	O	Chip enable signal output to the PLL IC (IC781)
97	PLLCLK	O	Serial data transfer clock signal output to the PLL IC (IC781)
98	PLLDATA	O	Serial data output to the PLL IC (IC781)
99, 100	NC	—	Not used (open)

*1 chucking motor (M103) control

Mode / Terminal	STOP	LOAD CHUCKING	SAVE	BRAKE
CH.F (pin ⑦①)	“H”	“H”	“L”	“L”
CH.R (pin ⑦②)	“H”	“L”	“H”	“L”

*2 elevator motor (M104) control

Mode / Terminal	STOP	ELEVATOR UP	ELEVATOR DOWN	BRAKE
ELVF (pin ⑦④)	“H”	“L”	“H”	“L”
ELVR (pin ⑦③)	“H”	“H”	“L”	“L”

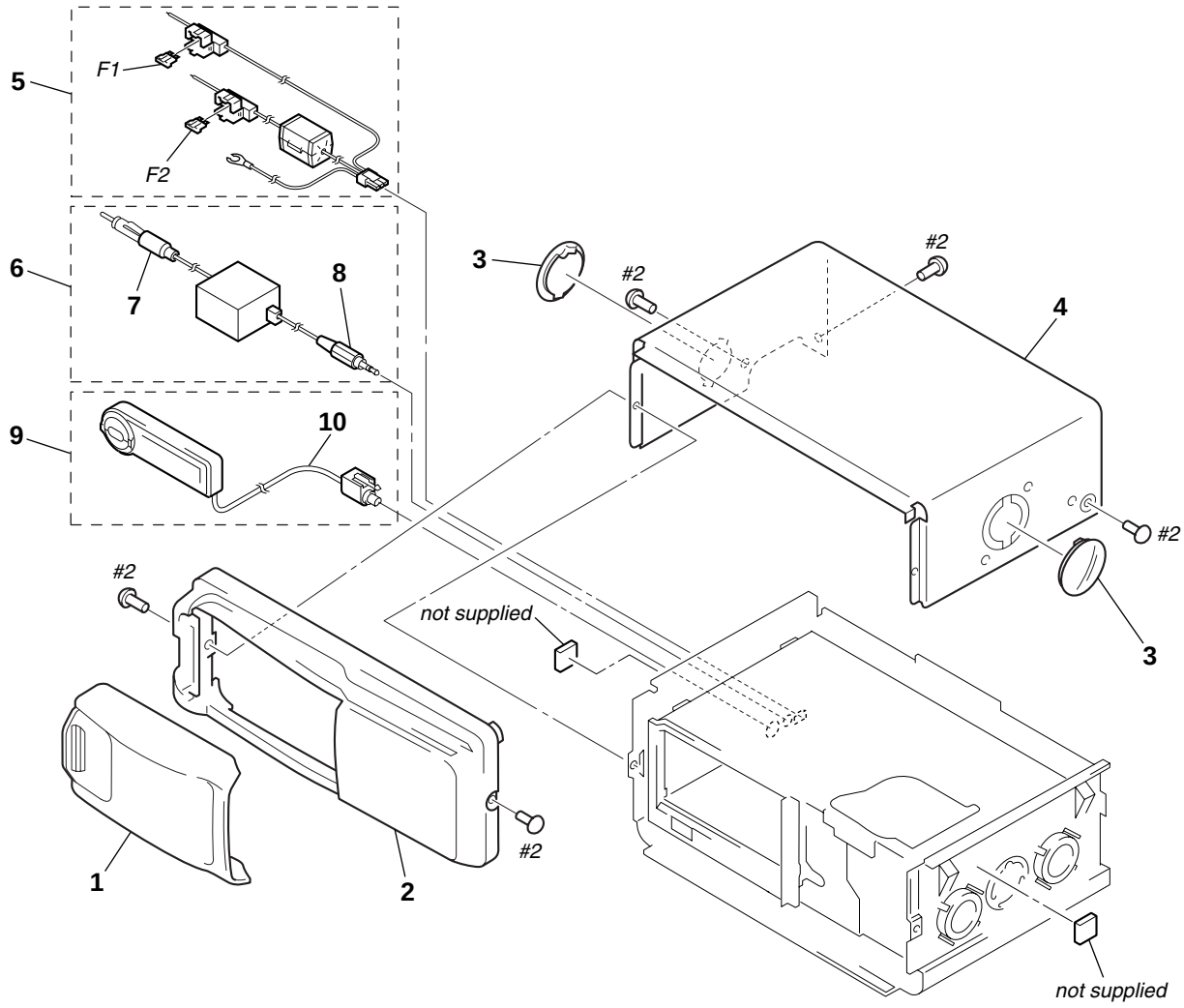
SECTION 7
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

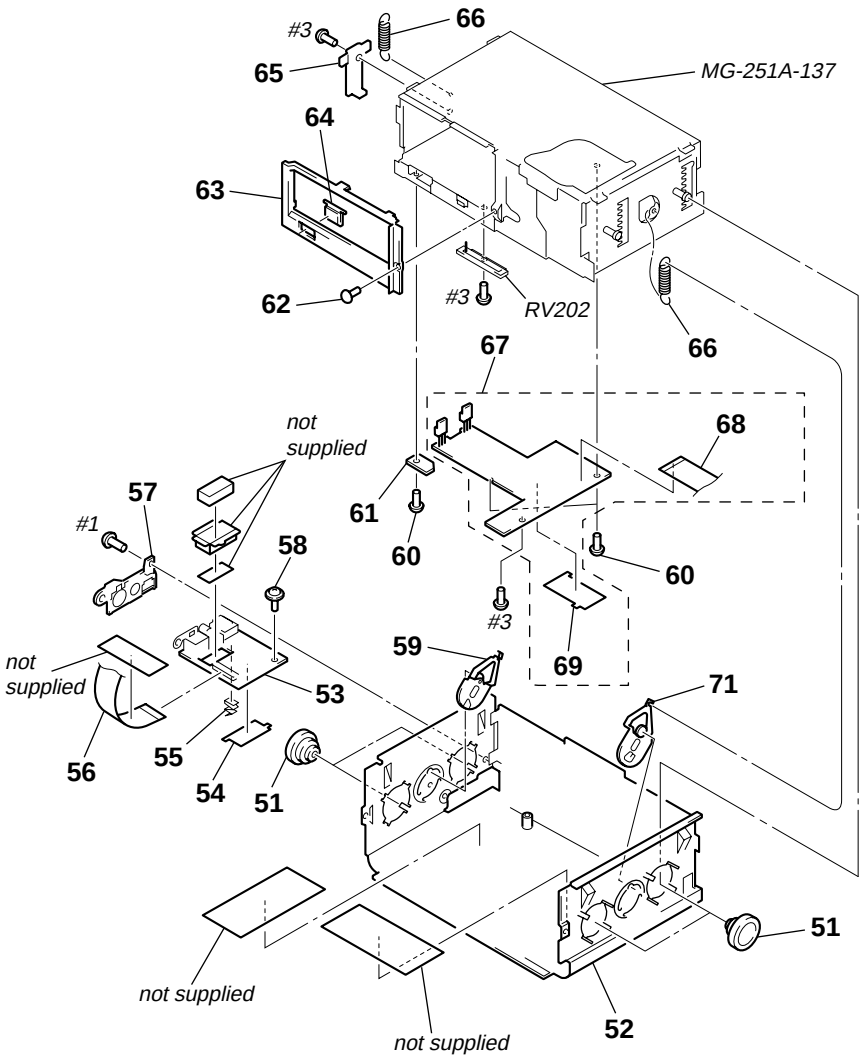
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) GENERAL SECTION-1



Ref. No.	Part No.	Description	Remark
1	X-3377-952-1	DOOR (T) ASSY	
2	3-039-239-51	PANEL (T), FRONT	
3	3-047-886-11	LEVER (FLT)	
* 4	3-046-160-11	CASE (UPPER.T)	
5	1-792-043-11	CORD (WITH CONNECTOR) (POWER)	
6	A-3301-964-A	RELAY BOX ASSY	
7	1-792-045-21	CORD (WITH CONNECTOR) (ANT-OUT)	
8	1-792-044-21	CORD (WITH CONNECTOR) (CD-OUT)	
9	A-3220-787-A	WIRED COMMANDER (RM-X82RF) (GREEN ILLUMINATION)	
9	A-3220-788-A	WIRED COMMANDER (RM-X82RF) (AMBER ILLUMINATION)	
10	1-792-596-11	CABLE (WITH CONNECTOR) (for RM-X82RF)	
F1	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A/32V)	
F2	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A/32V)	

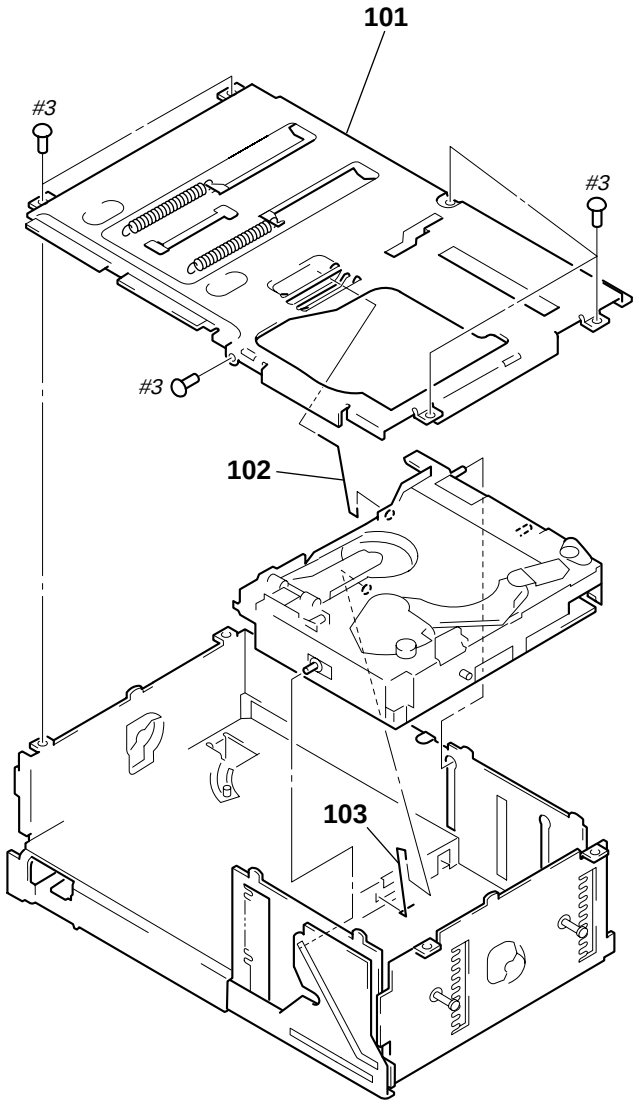
(2) GENERAL SECTION-2



Ref. No.	Part No.	Description	Remark
51	3-047-852-01	DAMPER (T)	
* 52	X-3378-122-1	CASE (LOWER. T) ASSY	
* 53	A-3326-027-A	FM BOARD, COMPLETE	
* 54	3-046-989-01	PLATE (FM), SHIELD	
55	3-225-783-01	SPRING (GROUND)	
56	1-676-735-11	FM FLEXIBLE BOARD	
57	3-042-999-11	COVER (FM CONNECTOR. T)	
58	3-913-406-11	SCREW (GROUND)	
59	X-3375-357-1	ARM (FLT) ASSY	
60	3-935-636-11	SCREW (FP)	
* 61	1-676-722-11	SW BOARD	

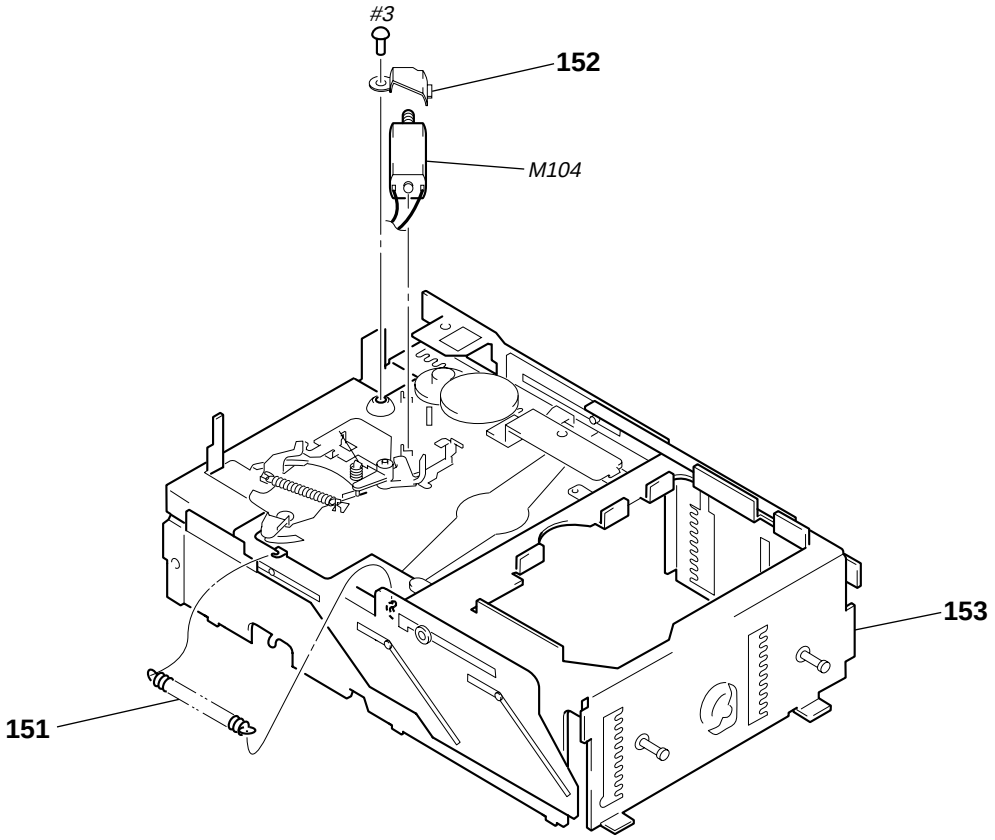
Ref. No.	Part No.	Description	Remark
62	3-042-244-11	SCREW (T)	
63	3-041-218-21	ESCUTCHEON (T)	
64	3-022-007-01	BUTTON (EJT) (⏏)	
* 65	3-022-012-01	HEAT SINK (T)	
66	3-038-166-01	SPRING (FL), TENSION COIL	
* 67	A-3283-116-A	MAIN BOARD, COMPLETE	
68	1-676-339-11	MAIN FLEXIBLE BOARD	
* 69	3-046-988-01	PLATE (MAIN), SHIELD	
71	X-3375-360-1	ARM (FRT) ASSY	
RV202	1-227-137-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)	

(3) MECHANISM DECK SECTION-1 (MG-251A-137)



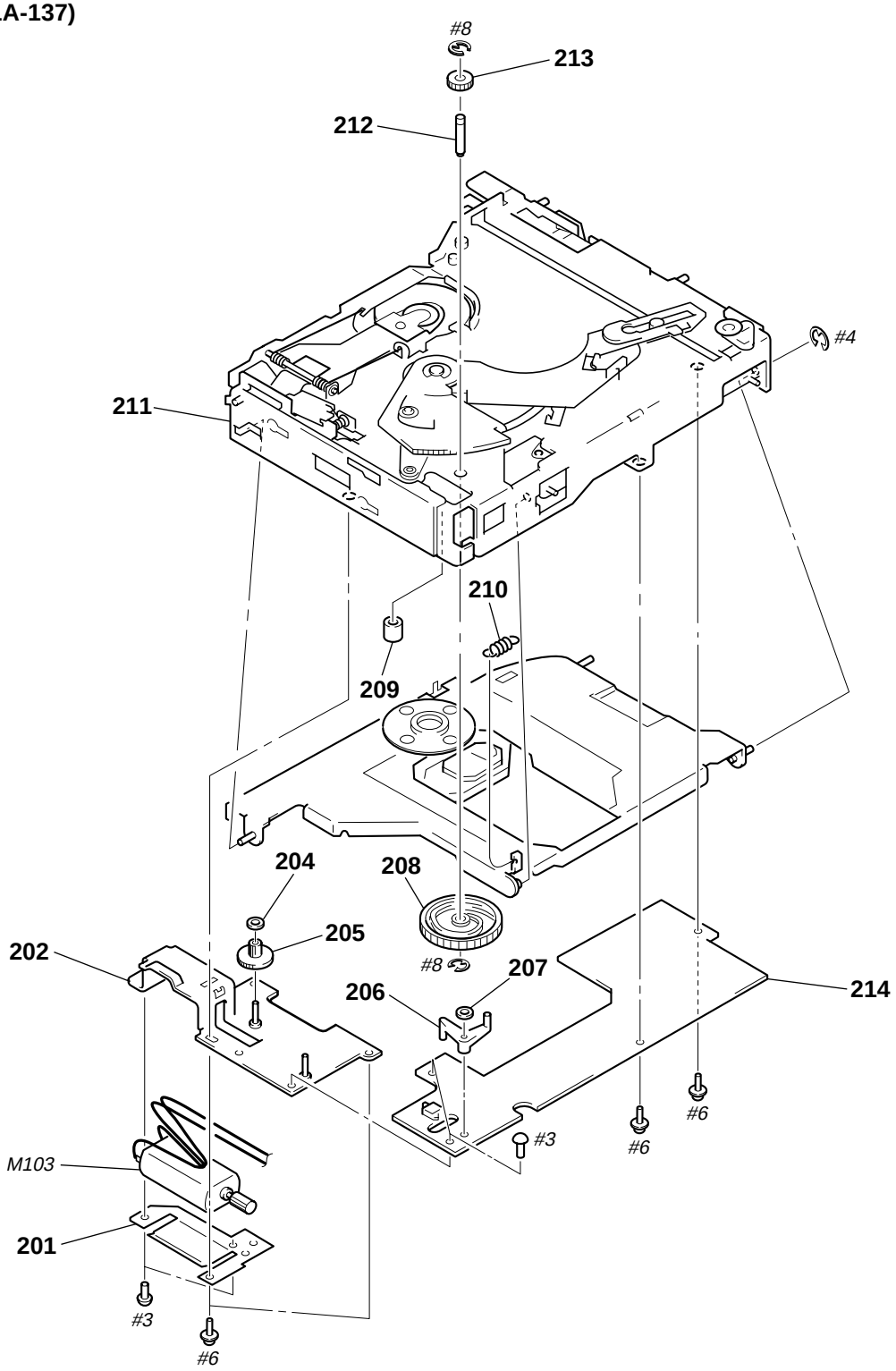
Ref. No.	Part No.	Description	Remark
101	X-3378-091-1	CHASSIS (U. S) SUB ASSY	
102	3-024-161-11	SPRING (SUT)	
103	3-011-997-01	SPRING (STOPPER. LOWER)	

(4) MECHANISM DECK SECTION-2 (MG-251A-137)



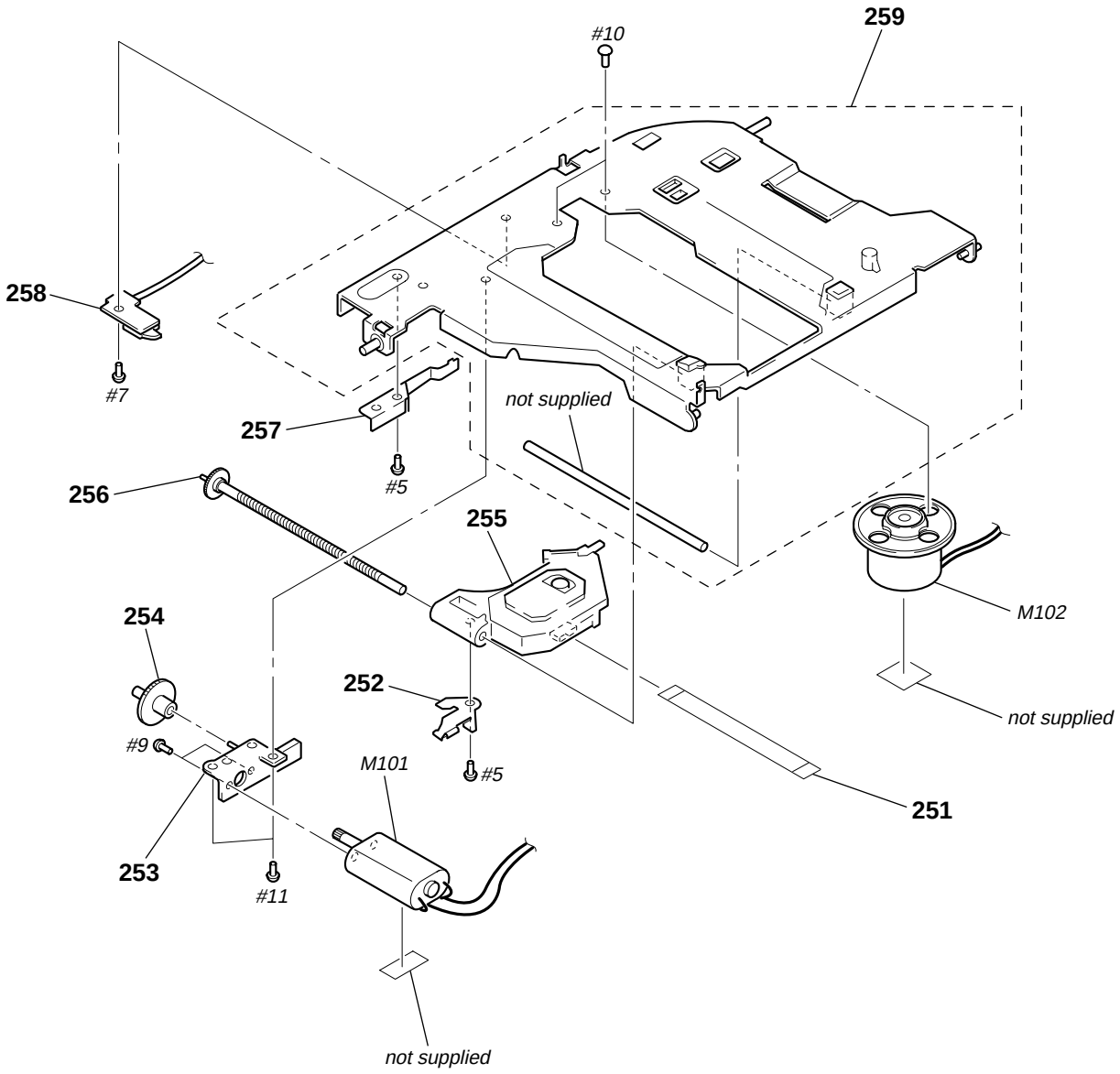
Ref. No.	Part No.	Description	Remark
151	3-024-170-01	SPRING (SB), TENSION	
* 152	3-040-790-01	BRACKET (EVM. S)	
153	X-3378-092-1	CHASSIS (D. S) SUB ASSY	
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)	

(5) MECHANISM DECK SECTION-3 (MG-251A-137)



Ref. No.	Part No.	Description	Remark
* 201	3-024-150-01	RETAINER (CHM)	
* 202	X-3378-080-1	BRACKET (CHM. D) ASSY	
204	3-321-813-01	WASHER, COTTER POLYETHYLENE	
205	3-017-139-01	GEAR (WORM LOAD A)	
206	3-022-839-01	ARM (NSW)	
207	3-573-936-00	STOPPER, REEL	
208	X-3375-220-1	GEAR (LOAD CAM) ASSY	
209	3-010-252-11	ROLLER (CRE)	
210	3-010-268-01	SPRING (DH), TENSION	
* 211	A-3290-194-C	MAIN ASSY, CHASSIS (EVY)	
212	3-010-254-11	SHAFT (ROTARY PREVENTION C)	
213	3-010-253-01	GEAR (LOMINI)	
* 214	A-3326-000-A	RF BOARD, COMPLETE	
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)	

(6) MECHANISM DECK SECTION-4 (MG-251A-137)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
251	1-676-341-11	OP FLEXIBLE BOARD	
252	3-025-743-01	SPRING (FEED), LEAF	
253	X-3378-101-1	HOLDER (SLED. S) ASSY	
254	3-931-832-01	GEAR (SL MIDWAY)	
⚠255	8-820-103-05	OPTICAL PICK-UP KSS-720A/Q-RP	
256	A-3291-669-A	SHAFT (FEED) ASSY	
257	3-010-263-01	DETENT (SHAFT THRUST)	
* 258	1-676-524-11	LSW BOARD	
259	A-3301-954-A	BASE (OPT. S) (J) ASSY	
M101	A-3315-151-A	SLED MOTOR ASSY (251)	
M102	A-3301-998-A	SPINDLE MOTOR (S) SUB ASSY	

SECTION 8
ELECTRICAL PARTS LIST

FM

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3326-027-A	FM BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C303	1-127-820-11	CERAMIC CHIP	4.7uF		16V
C304	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C305	1-128-499-11	ELECT	220uF	20%	16V
C319	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C320	1-115-866-11	ELECT	4.7uF	20%	35V
C322	1-125-972-61	ELECT	100uF	20%	16V
C323	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C324	1-124-584-00	ELECT	100uF	20%	10V
C325	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C326	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C328	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C329	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C331	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C701	1-126-514-11	ELECT	22uF	20%	10V
C702	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C703	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C704	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C705	1-115-866-11	ELECT	4.7uF	20%	35V
C706	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C707	1-162-997-11	CERAMIC CHIP	10PF	0.5PF	50V
C708	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C709	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C710	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C711	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C712	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C713	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C714	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C715	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C716	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C720	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C741	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C742	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C743	1-115-872-11	ELECT	2.2uF	20%	50V
C761	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C762	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C763	1-115-872-11	ELECT	2.2uF	20%	50V
C781	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C782	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C783	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C784	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C785	1-126-514-11	ELECT	22uF	20%	10V
C786	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C787	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C788	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
		< CONNECTOR/JACK >			
CN302	1-794-066-11	CONNECTOR, MINIATURE DIN 8P (DISPLAY)			
CN303	1-793-286-11	PIN, CONNECTOR (PC BOARD) 3P (POWER)			
CN701	1-784-829-21	CONNECTOR, FPC 21P			
CN703	1-566-822-41	JACK (OUTPUT)			
		< DIODE >			
D301	8-719-029-25	DIODE DSA3A4-F2			
D302	8-719-022-90	DIODE MA8160-M			
D310	8-719-423-23	DIODE MA8110-M			
D311	8-719-977-12	DIODE DTZ6.8B			
D312	8-719-801-78	DIODE 1SS184			
D313	8-719-977-12	DIODE DTZ6.8B			
D314	8-719-977-12	DIODE DTZ6.8B			
D701	8-719-058-78	DIODE HVU202A3TRF			
D702	8-719-988-61	DIODE 1SS355TE-17			
D703	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC304	8-759-711-59	IC NJM78L05UA-TE1			
IC701	8-759-393-50	IC BA1405F-E2			
IC781	8-759-595-05	IC BU2611AFS-E2			
		< COIL >			
L301	1-419-545-11	INDUCTOR	1mH		
L701	1-419-467-11	COIL, IFT			
L702	1-411-845-11	COIL, AIR-CORE			
L703	1-410-997-42	INDUCTOR CHIP	2.2uH		
		< TRANSISTOR >			
Q301	8-729-900-53	TRANSISTOR	DTC114EK		
Q308	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q309	1-801-806-11	TRANSISTOR	DTC144EKA		
Q310	8-729-027-31	TRANSISTOR	DTA124EKA-T146		
Q311	8-729-106-68	TRANSISTOR	2SD1615A-GP		
Q701	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q702	8-729-804-72	TRANSISTOR	2SC2814-F4		
Q703	8-729-804-72	TRANSISTOR	2SC2814-F4		
Q781	8-729-120-28	TRANSISTOR	2SC1623-L5L6		

FM **LSW** **MAIN**

Ref. No.	Part No.	Description			Remark
Q782	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R301	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R310	1-216-089-11	RES-CHIP	47K	5%	1/10W
R311	1-216-085-00	METAL CHIP	33K	5%	1/10W
R312	1-216-841-11	METAL CHIP	47K	5%	1/16W
R313	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R315	1-216-041-00	METAL CHIP	470	5%	1/10W
R316	1-216-025-11	RES-CHIP	100	5%	1/10W
R317	1-216-041-00	METAL CHIP	470	5%	1/10W
R319	1-216-041-00	METAL CHIP	470	5%	1/10W
R320	1-216-041-00	METAL CHIP	470	5%	1/10W
R321	1-216-041-00	METAL CHIP	470	5%	1/10W
R399	1-216-296-00	SHORT	0		
R701	1-216-850-11	METAL CHIP	270K	5%	1/16W
R702	1-216-835-11	METAL CHIP	15K	5%	1/16W
R703	1-216-818-11	METAL CHIP	560	5%	1/16W
R704	1-216-809-11	METAL CHIP	100	5%	1/16W
R705	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R706	1-216-833-11	METAL CHIP	10K	5%	1/16W
R707	1-216-833-11	METAL CHIP	10K	5%	1/16W
R708	1-216-834-11	METAL CHIP	12K	5%	1/16W
R709	1-216-821-11	METAL CHIP	1K	5%	1/16W
R710	1-216-833-11	METAL CHIP	10K	5%	1/16W
R711	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R712	1-216-817-11	METAL CHIP	470	5%	1/16W
R713	1-216-845-11	METAL CHIP	100K	5%	1/16W
R714	1-216-815-11	METAL CHIP	330	5%	1/16W
R715	1-216-809-11	METAL CHIP	100	5%	1/16W
R716	1-216-037-00	METAL CHIP	330	5%	1/10W
R717	1-216-025-11	RES-CHIP	100	5%	1/10W
R741	1-216-821-11	METAL CHIP	1K	5%	1/16W
R742	1-216-833-11	METAL CHIP	10K	5%	1/16W
R743	1-216-840-11	METAL CHIP	39K	5%	1/16W
R745	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R746	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R761	1-216-821-11	METAL CHIP	1K	5%	1/16W
R762	1-216-833-11	METAL CHIP	10K	5%	1/16W
R763	1-216-840-11	METAL CHIP	39K	5%	1/16W
R765	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R766	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R781	1-216-837-11	METAL CHIP	22K	5%	1/16W
R782	1-216-833-11	METAL CHIP	10K	5%	1/16W
R783	1-216-819-11	METAL CHIP	680	5%	1/16W
R784	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R787	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R788	1-216-049-11	RES-CHIP	1K	5%	1/10W
R789	1-216-049-11	RES-CHIP	1K	5%	1/10W
		< VARIABLE RESISTOR >			
RV701	1-238-092-11	RES, ADJ, CERMET 47K			
RV702	1-238-086-11	RES, ADJ, CERMET 470			
		< VIBRATOR >			
X701	1-567-093-00	VIBRATOR, CRYSTAL (38kHz)			
X781	1-760-838-21	VIBRATOR, CRYSTAL (7.2MHz)			

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Ref. No.	Part No.	Description			Remark
*	1-676-524-13	LSW BOARD			
		**********			
		< SWITCH >			
SW3	1-529-565-41	SWITCH, PUSH (1 KEY) (LIMIT)			

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*	A-3283-116-A	MAIN BOARD, COMPLETE			
		**********			
	1-676-339-12	MAIN FLEXIBLE BOARD			
*	3-046-988-01	PLATE (MAIN) , SHIELD			
		< CAPACITOR >			
C101	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C111	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C112	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C120	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C121	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C122	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C125	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C126	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C129	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C130	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C140	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C141	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C142	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C143	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C144	1-126-382-11	ELECT	100uF	20%	16V
C145	1-126-382-11	ELECT	100uF	20%	16V
C201	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-165-112-11	CERAMIC CHIP	0.33uF	20%	10V
C308	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C311	1-126-382-11	ELECT	100uF	20%	16V
C312	1-115-156-11	CERAMIC CHIP	1uF		10V
C313	1-126-382-11	ELECT	100uF	20%	16V
C314	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C315	1-115-466-00	ELECT	1000uF	20%	16V
C316	1-126-382-11	ELECT	100uF	20%	16V
C317	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C318	1-126-382-11	ELECT	100uF	20%	16V
C319	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C401	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C402	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C404	1-126-157-11	ELECT	10uF	20%	16V
C405	1-126-157-11	ELECT	10uF	20%	16V
C406	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C407	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C416	1-126-382-11	ELECT	100uF	20%	16V
		< CONNECTOR >			
CN231	1-784-829-21	CONNECTOR, FPC 21P			
		< DIODE >			
D201	8-719-978-33	DIODE DTZ-TT11-6.8B			
D202	8-719-978-33	DIODE DTZ-TT11-6.8B			
D231	8-719-988-61	DIODE 1SS355TE-17			
D306	8-719-069-56	DIODE UDZS-TE17-6.2B			
D307	8-719-988-61	DIODE 1SS355TE-17			
D308	8-719-914-44	DIODE DAP202K			
D309	8-719-988-61	DIODE 1SS355TE-17			
D310	8-719-422-67	DIODE MA8062-H			
D311	8-719-978-33	DIODE DTZ-TT11-6.8B			
D312	8-719-978-33	DIODE DTZ-TT11-6.8B			
D313	8-719-978-33	DIODE DTZ-TT11-6.8B			
		< IC >			
IC101	8-752-392-04	IC CXD2598Q			
IC201	8-752-921-24	IC CXP740056-010R			
IC301	8-759-527-33	IC LB1930M-TLM			
IC303	8-759-363-81	IC XC61AN4002PR			
IC304	8-759-655-30	IC NJM2395F08			
IC305	8-759-655-29	IC NJM2395F05			
IC401	8-759-662-11	IC TLV2362IPWR			
		< COIL >			
L140	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q201	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q231	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q232	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q301	8-729-028-62	TRANSISTOR	DTA115EKA-T146		
Q302	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q303	8-729-921-12	TRANSISTOR	2SD1834		
Q401	8-729-901-00	TRANSISTOR	DTC124EK		
Q402	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q410	8-729-015-39	TRANSISTOR	DTC323TK		
Q420	8-729-015-39	TRANSISTOR	DTC323TK		
		< RESISTOR >			
R101	1-216-833-11	METAL CHIP	10K	5%	1/16W
R111	1-216-833-11	METAL CHIP	10K	5%	1/16W
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W
R114	1-216-833-11	METAL CHIP	10K	5%	1/16W
R115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-216-837-11	METAL CHIP	22K	5%	1/16W
R117	1-216-845-11	METAL CHIP	100K	5%	1/16W
R120	1-216-839-11	METAL CHIP	33K	5%	1/16W
R121	1-216-845-11	METAL CHIP	100K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-833-11	METAL CHIP	10K	5%	1/16W
R124	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R125	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R126	1-216-857-11	METAL CHIP	1M	5%	1/16W
R140	1-216-834-11	METAL CHIP	12K	5%	1/16W
R141	1-216-834-11	METAL CHIP	12K	5%	1/16W
R142	1-216-834-11	METAL CHIP	12K	5%	1/16W
R143	1-216-834-11	METAL CHIP	12K	5%	1/16W
R144	1-216-834-11	METAL CHIP	12K	5%	1/16W
R145	1-216-834-11	METAL CHIP	12K	5%	1/16W
R146	1-216-833-11	METAL CHIP	10K	5%	1/16W
R147	1-216-833-11	METAL CHIP	10K	5%	1/16W
R201	1-216-821-11	METAL CHIP	1K	5%	1/16W
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W
R209	1-216-833-11	METAL CHIP	10K	5%	1/16W
R232	1-216-845-11	METAL CHIP	100K	5%	1/16W
R233	1-216-833-11	METAL CHIP	10K	5%	1/16W
R234	1-216-821-11	METAL CHIP	1K	5%	1/16W
R252	1-216-845-11	METAL CHIP	100K	5%	1/16W
R253	1-216-845-11	METAL CHIP	100K	5%	1/16W
R254	1-216-845-11	METAL CHIP	100K	5%	1/16W
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W
R303	1-216-846-11	METAL CHIP	120K	5%	1/16W
R304	1-216-847-11	METAL CHIP	150K	5%	1/16W
R305	1-216-841-11	METAL CHIP	47K	5%	1/16W
R306	1-216-844-11	METAL CHIP	82K	5%	1/16W
R311	1-216-841-11	METAL CHIP	47K	5%	1/16W
R315	1-216-864-11	METAL CHIP	0	5%	1/16W
R401	1-216-833-11	METAL CHIP	10K	5%	1/16W
R402	1-216-833-11	METAL CHIP	10K	5%	1/16W
R403	1-216-833-11	METAL CHIP	10K	5%	1/16W
R404	1-216-833-11	METAL CHIP	10K	5%	1/16W
R405	1-216-833-11	METAL CHIP	10K	5%	1/16W
R406	1-216-833-11	METAL CHIP	10K	5%	1/16W
R407	1-216-833-11	METAL CHIP	10K	5%	1/16W
R408	1-216-833-11	METAL CHIP	10K	5%	1/16W
R411	1-216-813-11	METAL CHIP	220	5%	1/16W
R412	1-216-813-11	METAL CHIP	220	5%	1/16W
R413	1-216-845-11	METAL CHIP	100K	5%	1/16W
R414	1-216-845-11	METAL CHIP	100K	5%	1/16W
R415	1-216-864-11	METAL CHIP	0	5%	1/16W
R416	1-216-864-11	METAL CHIP	0	5%	1/16W
R420	1-216-864-11	METAL CHIP	0	5%	1/16W
		< VARIABLE RESISTOR >			
RV201	1-223-834-11	RES, ADJ, CARBON 47K			
		< SWITCH >			
SW201	1-529-565-41	SWITCH, PUSH (1 KEY) (MAGAZINE DETECT)			
		< VIBRATOR >			
X130	1-760-307-11	VIBRATOR, CERAMIC (16.9344MHz)			
X201	1-579-126-11	VIBRATOR, CERAMIC (12MHz)			

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RF **SW**

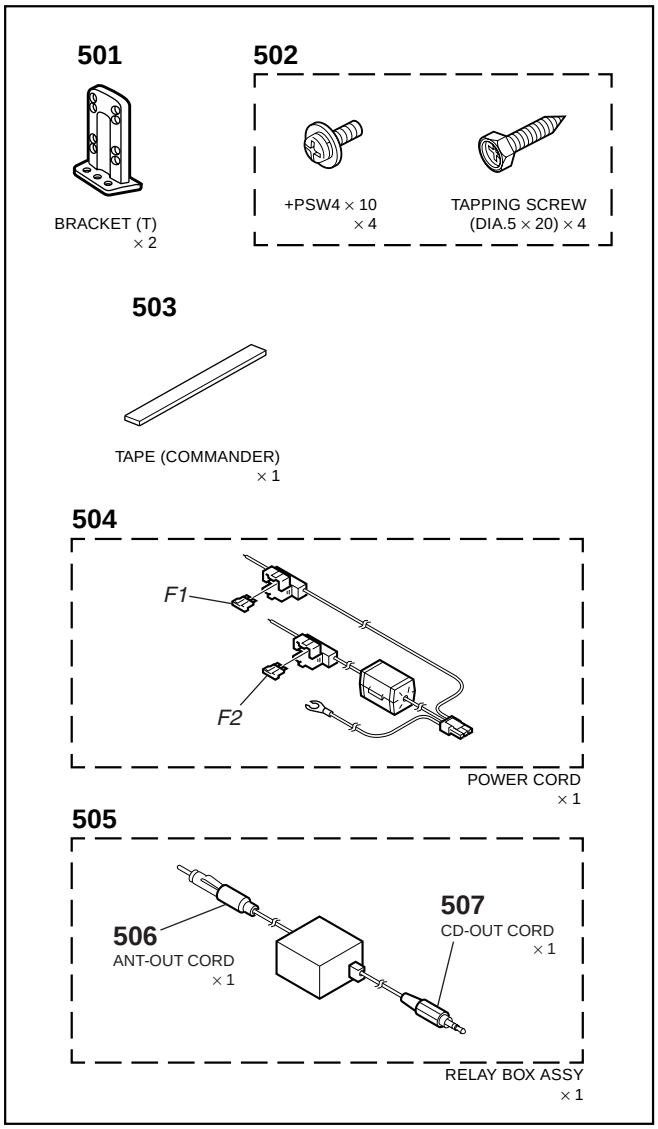
Ref. No.	Part No.	Description			Remark
*	A-3326-000-A	RF BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C102	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C106	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C107	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C108	1-124-779-00	ELECT CHIP	10uF	20%	16V
C109	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C110	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C111	1-124-779-00	ELECT CHIP	10uF	20%	16V
C201	1-117-681-11	ELECT CHIP	100uF	20%	16V
C202	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C204	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C205	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C206	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C207	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C208	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C209	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C217	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN102	1-778-303-21	CONNECTOR, FPC (ZIF) 16P			
CNJ101	1-778-777-21	CONNECTOR, FPC 26P			
		< IC >			
IC101	8-752-095-36	IC CXA2596M-T6			
IC201	8-759-832-99	IC LA6576L-TE-L			
		< TRANSISTOR >			
Q101	8-729-141-48	TRANSISTOR	2SB624-BV345		
		< RESISTOR >			
R101	1-216-847-11	METAL CHIP	150K	5%	1/16W
R102	1-216-847-11	METAL CHIP	150K	5%	1/16W
R103	1-216-864-11	METAL CHIP	0	5%	1/16W
R104	1-216-158-00	RES-CHIP	22	5%	1/8W
R105	1-216-857-11	METAL CHIP	1M	5%	1/16W
R106	1-216-857-11	METAL CHIP	1M	5%	1/16W
R107	1-216-864-11	METAL CHIP	0	5%	1/16W
R108	1-216-845-11	METAL CHIP	100K	5%	1/16W
R109	1-216-837-11	METAL CHIP	22K	5%	1/16W
R110	1-216-821-11	METAL CHIP	1K	5%	1/16W
R201	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W
R203	1-216-833-11	METAL CHIP	10K	5%	1/16W
R204	1-216-842-11	METAL CHIP	56K	5%	1/16W
R205	1-216-833-11	METAL CHIP	10K	5%	1/16W
R206	1-216-842-11	METAL CHIP	56K	5%	1/16W
R207	1-216-833-11	METAL CHIP	10K	5%	1/16W
R208	1-216-842-11	METAL CHIP	56K	5%	1/16W
R209	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R210	1-216-842-11	METAL CHIP	56K	5%	1/16W
R211	1-216-833-11	METAL CHIP	10K	5%	1/16W
R212	1-216-839-11	METAL CHIP	33K	5%	1/16W
R213	1-216-833-11	METAL CHIP	10K	5%	1/16W
R214	1-216-839-11	METAL CHIP	33K	5%	1/16W
R215	1-216-839-11	METAL CHIP	33K	5%	1/16W
R216	1-216-842-11	METAL CHIP	56K	5%	1/16W
R218	1-216-839-11	METAL CHIP	33K	5%	1/16W
R219	1-216-843-11	METAL CHIP	68K	5%	1/16W
R220	1-216-834-11	METAL CHIP	12K	5%	1/16W
R222	1-216-821-11	METAL CHIP	1K	5%	1/16W
R223	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< SWITCH >			
SW1	1-529-566-41	SWITCH, PUSH (1 KEY) (CHUCKING END DETECT)			
SW2	1-529-566-41	SWITCH, PUSH (1 KEY) (SAVE END DETECT)			
**********					
*	1-676-722-12	SW BOARD			
		*********			
		< SWITCH >			
SW301	1-571-532-21	SWITCH, TACTIL (⏏)			
SW302	1-571-532-21	SWITCH, TACTIL (RESET)			
**********					
		MISCELLANEOUS			
		**********			
5	1-792-043-11	CORD (WITH CONNECTOR) (POWER)			
7	1-792-045-21	CORD (WITH CONNECTOR) (ANT-OUT)			
8	1-792-044-21	CORD (WITH CONNECTOR) (CD-OUT)			
9	A-3220-787-A	WIRED COMMANDER (RM-X82RF) (GREEN ILLUMINATION)			
9	A-3220-788-A	WIRED COMMANDER (RM-X82RF) (AMBER ILLUMINATION)			
10	1-792-596-11	CABLE (WITH CONNECTOR) (for RM-X82RF)			
56	1-676-735-11	FM FLEXIBLE BOARD			
251	1-676-341-11	OP FLEXIBLE BOARD			
⚠255	8-820-103-05	OPTICAL PICK-UP KSS-720A/Q-RP			
F1	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A/32V)			
F2	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A/32V)			
M101	A-3315-151-A	SLED MOTOR ASSY (251)			
M102	A-3301-998-A	SPINDLE MOTOR (S) SUB ASSY			
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)			
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)			
RV202	1-227-137-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)			
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-685-781-09	SCREW +PTT 2X4 (S)	
#4	7-624-104-04	STOP RING 2.0, TYPE -E	
#5	7-627-554-07	SCREW, PRECISION +P 2X2.2	
#6	7-628-253-00	SCREW +PS 2X4	
#7	7-627-553-27	SCREW, PRECISION +P 2X2.5	
#8	7-624-102-04	STOP RING 1.5, TYPE -E	
#9	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#10	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE 3	
#11	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
**********			
		ACCESSORIES	
		**********	
	3-225-051-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	
	3-225-051-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, TRADITIONAL CHINESE)	
	3-225-051-31	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH, DUTCH, POLISH)	
	3-225-051-41	MANUAL, INSTRUCTION (DUTCH, ITALIAN, PORTUGUESE, GREEK)	
	3-225-052-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH)	
	3-225-052-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, TRADITIONAL CHINESE)	
	3-225-052-31	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, GERMAN, SPANISH)	
	3-225-052-41	MANUAL, INSTRUCTION, INSTALL (ITALIAN, DUTCH, PORTUGUESE, GREEK)	
	A-3220-787-A	WIRED COMMANDER (RM-X82RF) (GREEN ILLUMINATION)	
	A-3220-788-A	WIRED COMMANDER (RM-X82RF) (AMBER ILLUMINATION)	
	A-3301-944-A	MAGAZINE (250T) ASSY	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	3-040-583-21	BRACKET (T)	
* 502	X-3369-824-1	SCREW ASSY	
503	not supplied		
504	1-792-043-11	CORD (WITH CONNECTOR) (POWER)	
505	A-3301-964-A	RELAY BOX ASSY	
506	1-792-045-21	CORD (WITH CONNECTOR) (ANT-OUT)	
507	1-792-044-21	CORD (WITH CONNECTOR) (CD-OUT)	
F1	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A/32V)	
F2	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A/32V)	

Ref. No.	Part No.	Description	Remark



MEMO

CDX-444RF

SONY

SERVICE MANUAL

Ver 1.1 2001.06

US Model
Canadian Model
AEP Model
UK Model
E Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject: Change of MAIN/SW boards

(ECN-CSA03709)

In this set, MAIN and SW boards have been changed in the midway of production.
Printed wiring boards and schematic diagrams of new type, and changed parts list are described in this supplement-1.
Refer to original service manual for other information.

• NEW/FORMER TYPE DISCRIMINATION

In this set with the following serial No. or later MAIN and SW boards have been changed.

DESTINATION	SERIAL No.
US	1518236 or later
Canadian	1521345 or later
AEP and UK	1522500 or later
E	1521545 or later

NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

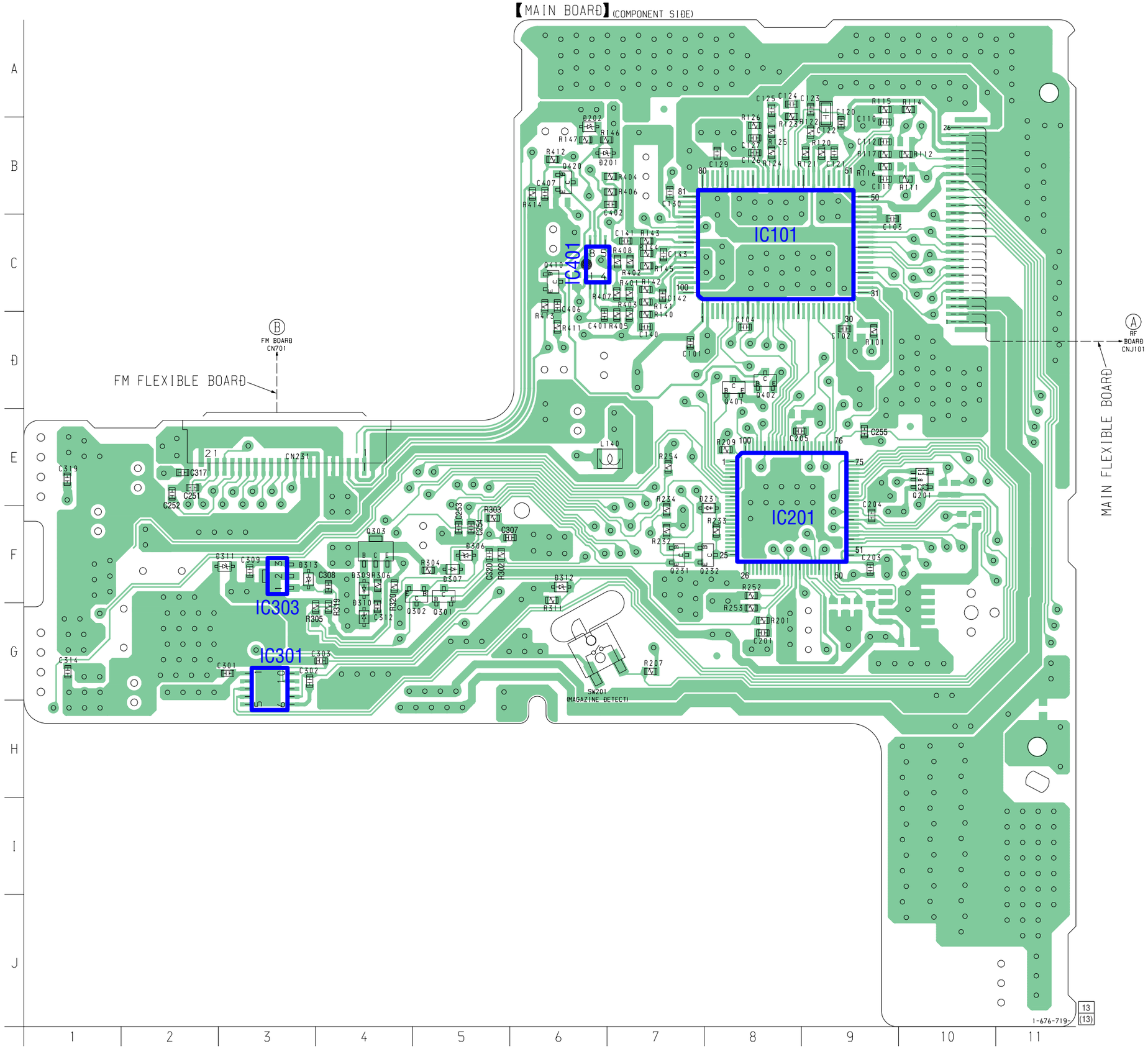
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from CD changer controller.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY

PRINTED WIRING BOARDS – MAIN Board (Component Side) –

- **Semiconductor Location**

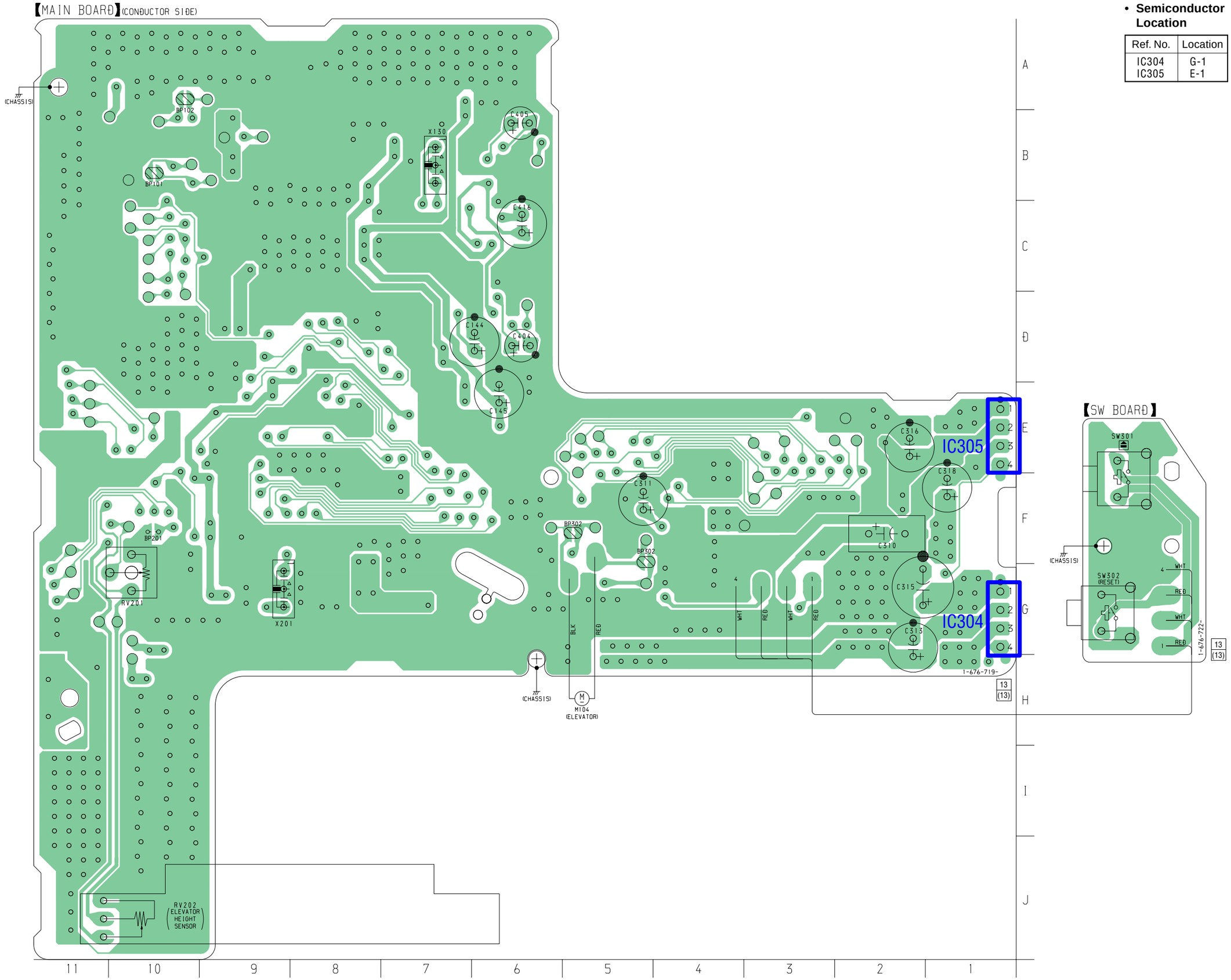
Ref. No.	Location
D201	B-6
D202	B-6
D231	F-8
D306	F-5
D307	F-5
D309	F-4
D310	G-4
D311	F-3
D312	F-6
D313	F-3
IC101	C-8
IC201	F-8
IC301	G-3
IC303	F-3
IC401	C-6
Q201	E-10
Q231	F-7
Q232	F-8
Q301	F-5
Q302	F-5
Q303	F-4
Q401	D-8
Q402	D-8
Q410	C-6
Q420	B-6



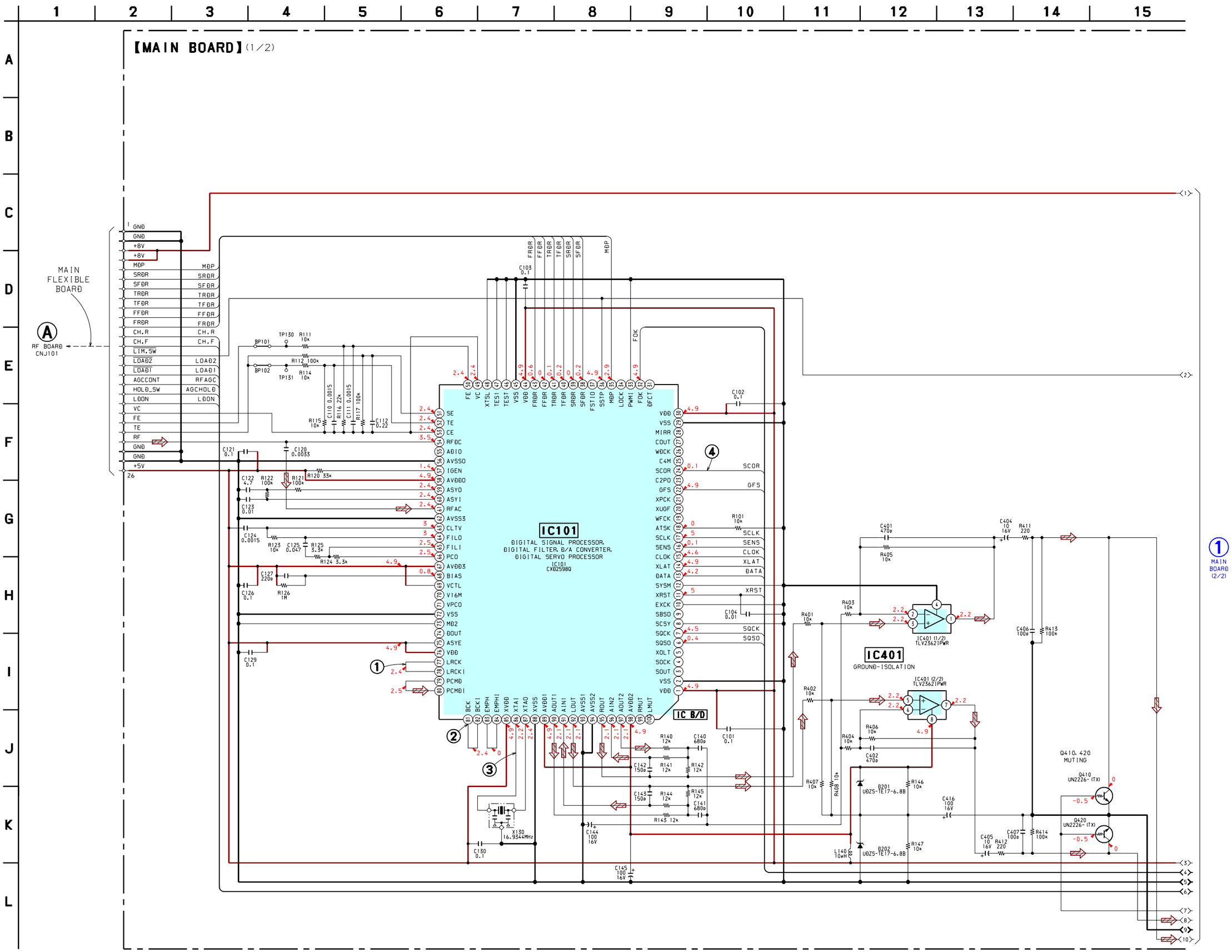
PRINTED WIRING BOARDS – MAIN (Conductor Side)/SW Boards –

- **Semiconductor Location**

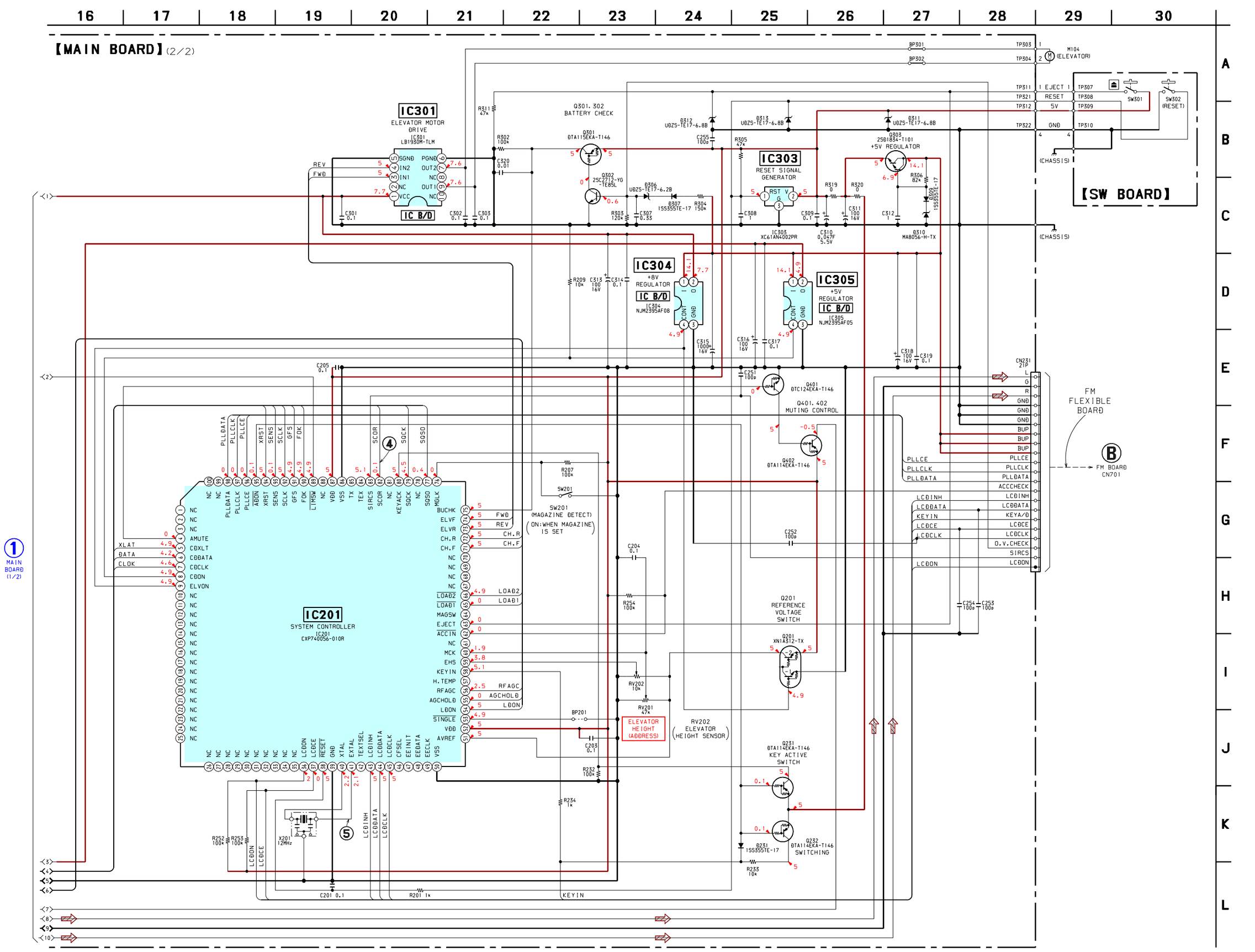
Ref. No.	Location
IC304	G-1
IC305	E-1



SCHEMATIC DIAGRAM – MAIN Board (1/2) –



SCHEMATIC DIAGRAM – MAIN (2/2)/SW Boards –



MAIN **SW**

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3283-116-A	MAIN BOARD, COMPLETE			
		**********			
	1-676-339-12	MAIN FLEXIBLE BOARD			
*	3-046-988-01	PLATE (MAIN) , SHIELD			
		< CAPACITOR >			
C101	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C111	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C112	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C120	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C121	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C122	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C125	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C126	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C129	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C130	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C140	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C141	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C142	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C143	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C144	1-126-382-11	ELECT	100uF	20%	16V
C145	1-126-382-11	ELECT	100uF	20%	16V
C201	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C252	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C253	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C254	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C255	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-165-112-11	CERAMIC CHIP	0.33uF	20%	10V
C308	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C311	1-126-382-11	ELECT	100uF	20%	16V
C312	1-115-156-11	CERAMIC CHIP	1uF		10V
C313	1-126-382-11	ELECT	100uF	20%	16V
C314	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C315	1-115-466-00	ELECT	1000uF	20%	16V
C316	1-126-382-11	ELECT	100uF	20%	16V
C317	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C318	1-126-382-11	ELECT	100uF	20%	16V
C319	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C402	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C404	1-126-157-11	ELECT	10uF	20%	16V
C405	1-126-157-11	ELECT	10uF	20%	16V
C406	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C407	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C416	1-126-382-11	ELECT	100uF	20%	16V
		< CONNECTOR >			
CN231	1-784-829-21	CONNECTOR, FPC 21P			
		< DIODE >			
D201	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D202	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D231	8-719-988-61	DIODE	1SS355TE-17		
D306	8-719-069-56	DIODE	UDZS-TE17-6.2B		
D307	8-719-988-61	DIODE	1SS355TE-17		
D309	8-719-988-61	DIODE	1SS355TE-17		
D310	8-719-977-03	DIODE	DTZ5.6B		
D311	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D312	8-719-978-33	DIODE	DTZ-TT11-6.8B		
D313	8-719-978-33	DIODE	DTZ-TT11-6.8B		
		< IC >			
IC101	8-752-392-04	IC	CXD2598Q		
IC201	8-752-921-24	IC	CXP740056-010R		
IC301	8-759-527-33	IC	LB1930M-TLM		
IC303	8-759-363-81	IC	XC61AN4002PR		
IC304	8-759-833-13	IC	NJM2395AF08		
IC305	8-759-833-12	IC	NJM2395AF05		
IC401	8-759-662-11	IC	TLV2362IPWR		
L140	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q201	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q231	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q232	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q301	8-729-028-62	TRANSISTOR	DTA115EKA-T146		
Q302	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q303	8-729-921-12	TRANSISTOR	2SD1834		
Q401	8-729-901-00	TRANSISTOR	DTC124EK		
Q402	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q410	8-729-015-39	TRANSISTOR	DTC323TK		
Q420	8-729-015-39	TRANSISTOR	DTC323TK		
		< RESISTOR >			
R101	1-216-833-11	METAL CHIP	10K	5%	1/16W
R111	1-216-833-11	METAL CHIP	10K	5%	1/16W
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W
R114	1-216-833-11	METAL CHIP	10K	5%	1/16W
R115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-216-837-11	METAL CHIP	22K	5%	1/16W
R117	1-216-845-11	METAL CHIP	100K	5%	1/16W
R120	1-216-839-11	METAL CHIP	33K	5%	1/16W
R121	1-216-845-11	METAL CHIP	100K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-833-11	METAL CHIP	10K	5%	1/16W
R124	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R125	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R126	1-216-857-11	METAL CHIP	1M	5%	1/16W
R140	1-216-834-11	METAL CHIP	12K	5%	1/16W
R141	1-216-834-11	METAL CHIP	12K	5%	1/16W
R142	1-216-834-11	METAL CHIP	12K	5%	1/16W
R143	1-216-834-11	METAL CHIP	12K	5%	1/16W
R144	1-216-834-11	METAL CHIP	12K	5%	1/16W
R145	1-216-834-11	METAL CHIP	12K	5%	1/16W
R146	1-216-833-11	METAL CHIP	10K	5%	1/16W
R147	1-216-833-11	METAL CHIP	10K	5%	1/16W
R201	1-216-821-11	METAL CHIP	1K	5%	1/16W
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W
R209	1-216-833-11	METAL CHIP	10K	5%	1/16W
R232	1-216-845-11	METAL CHIP	100K	5%	1/16W
R233	1-216-833-11	METAL CHIP	10K	5%	1/16W
R234	1-216-821-11	METAL CHIP	1K	5%	1/16W
R252	1-216-845-11	METAL CHIP	100K	5%	1/16W
R253	1-216-845-11	METAL CHIP	100K	5%	1/16W
R254	1-216-845-11	METAL CHIP	100K	5%	1/16W
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W
R303	1-216-846-11	METAL CHIP	120K	5%	1/16W
R304	1-216-847-11	METAL CHIP	150K	5%	1/16W
R305	1-216-841-11	METAL CHIP	47K	5%	1/16W
R306	1-216-844-11	METAL CHIP	82K	5%	1/16W
R311	1-216-841-11	METAL CHIP	47K	5%	1/16W
R319	1-216-864-11	METAL CHIP	0	5%	1/16W
R320	1-216-864-11	METAL CHIP	0	5%	1/16W
R401	1-216-833-11	METAL CHIP	10K	5%	1/16W
R402	1-216-833-11	METAL CHIP	10K	5%	1/16W
R403	1-216-833-11	METAL CHIP	10K	5%	1/16W
R404	1-216-833-11	METAL CHIP	10K	5%	1/16W
R405	1-216-833-11	METAL CHIP	10K	5%	1/16W
R406	1-216-833-11	METAL CHIP	10K	5%	1/16W
R407	1-216-833-11	METAL CHIP	10K	5%	1/16W
R408	1-216-833-11	METAL CHIP	10K	5%	1/16W
R411	1-216-813-11	METAL CHIP	220	5%	1/16W
R412	1-216-813-11	METAL CHIP	220	5%	1/16W
R413	1-216-845-11	METAL CHIP	100K	5%	1/16W
R414	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< VARIABLE RESISTOR >			
RV201	1-223-834-11	RES, ADJ, CARBON 47K			
		< SWITCH >			
SW201	1-529-565-41	SWITCH, PUSH (1 KEY) (MAGAZINE DETECT)			
		< VIBRATOR >			
X130	1-760-307-11	VIBRATOR, CERAMIC (16.9344MHz)			
X201	1-579-126-11	VIBRATOR, CERAMIC (12MHz)			
**********					
*	1-676-722-13	SW BOARD			
		*********			
		< SWITCH >			
SW301	1-786-025-21	SWITCH, TACTIL (⏏)			
SW302	1-786-025-21	SWITCH, TACTIL (RESET)			

CDX-444RF

SONY

SERVICE MANUAL

Ver 1.3 2002.03

US Model
Canadian Model
AEP Model
UK Model
E Model

SUPPLEMENT-2

File this supplement with the service manual.

Subject: Change of FM board

(ECN-CSA04972)

In this set, FM board has been changed in the midway of production. Block diagrams printed wiring boards and schematic diagrams of new type, and changed parts list are described in this supplement-2. Refer to original service manual for other information.

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1. NEW/FORMER TYPE DISCRIMINATION

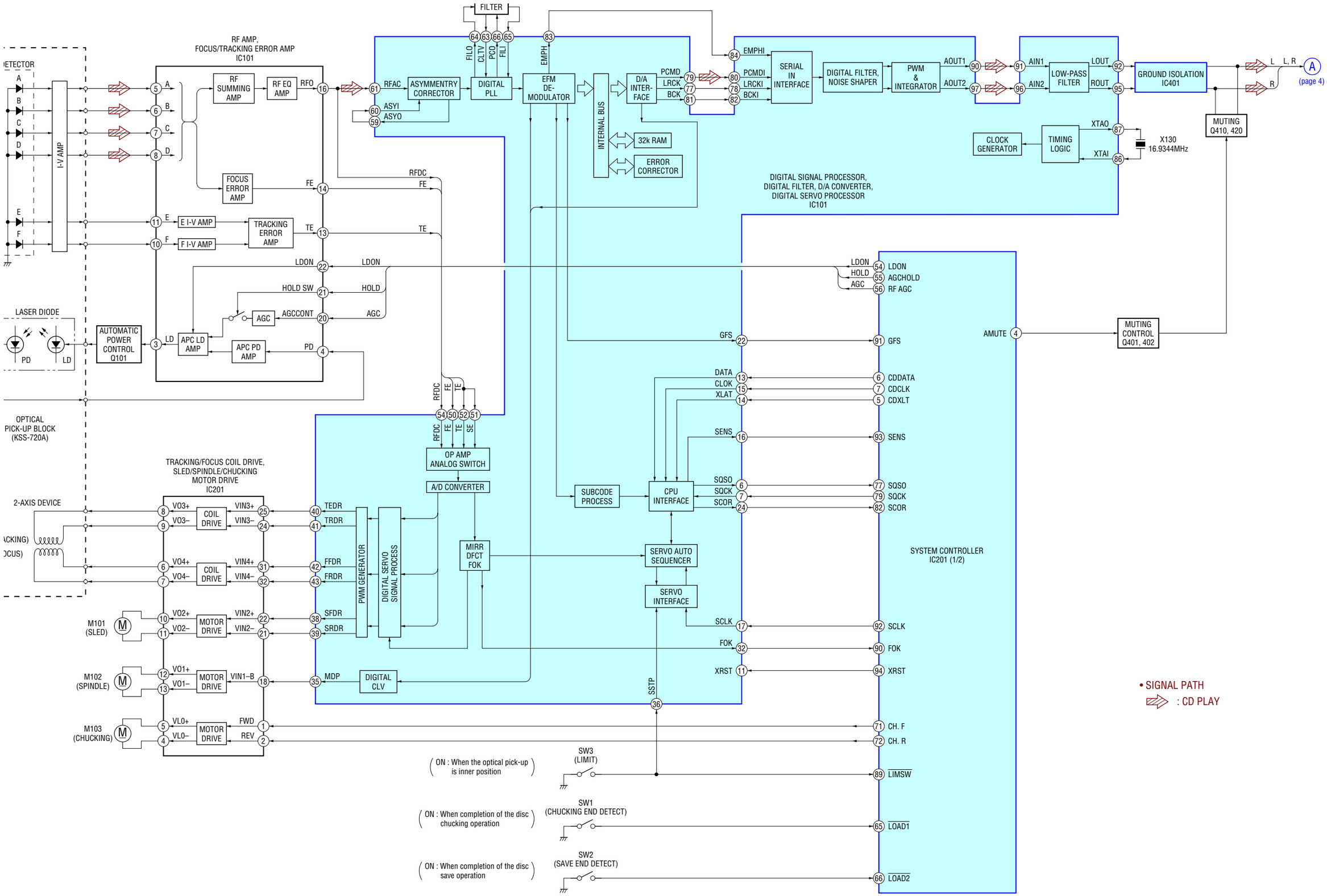
In this set with the following serial No. or later FM board has been changed. With the consequence of this change, parts mounted on MAIN board has been changed.

DESTINATION	SERIAL No.
US	1556756 or later
Canadian	1562146 or later
AEP and UK	1567181 or later
E	1562266 or later

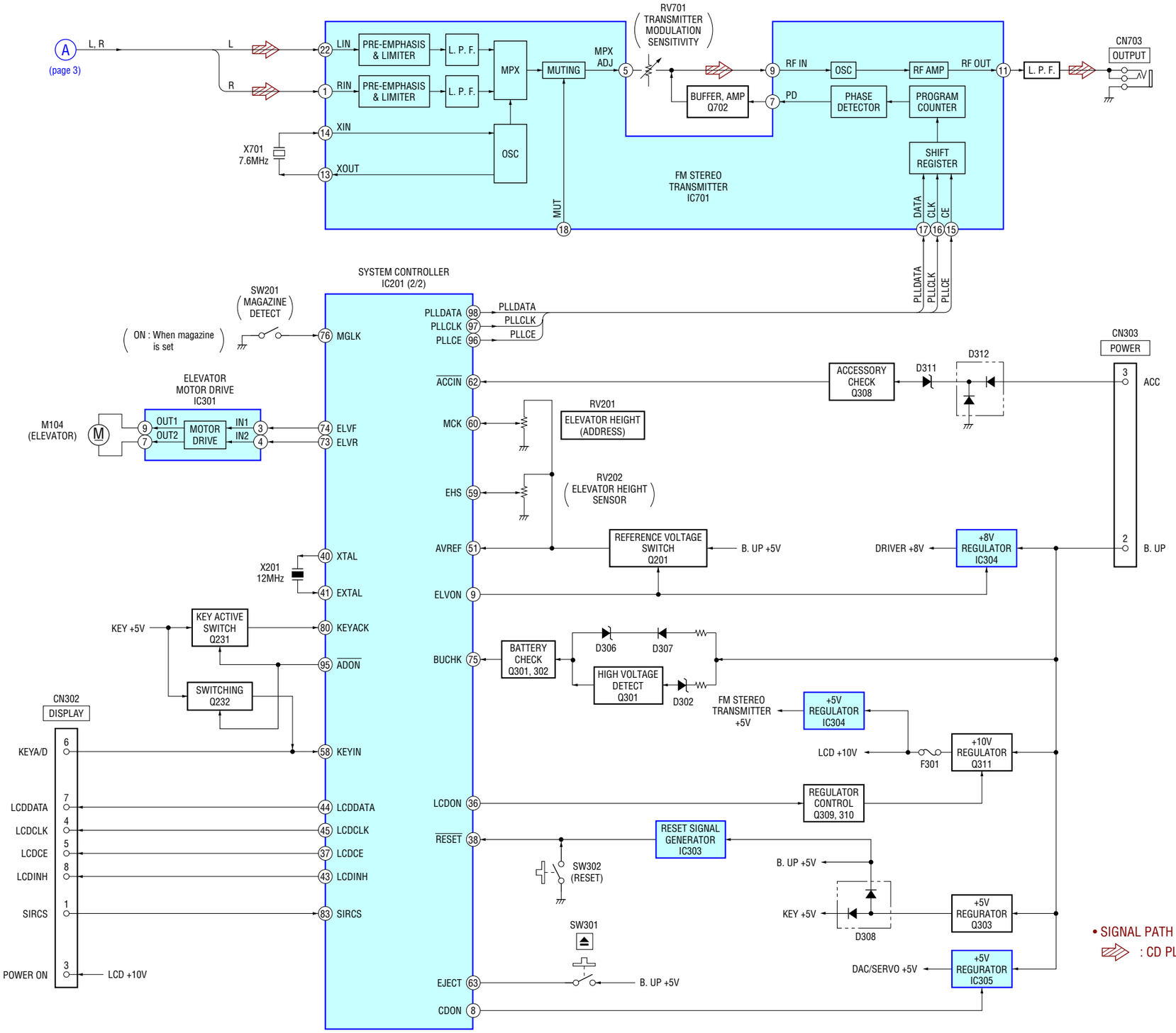
Note: When a former type MAIN board (US model: serial No. 1556755 or before, Canadian model: serial No. 1562145 or before, AEP and UK models: serial No. 1567180 or before, E model: serial No. 1562265 or before) is replaced as a whole, replace FM board with a new type one (Part No. A-3340-189-A) as well.

2. DIAGRAMS

2-1. BLOCK DIAGRAM – SERVO Section –



2-2. BLOCK DIAGRAM – MAIN Section –



2-3. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

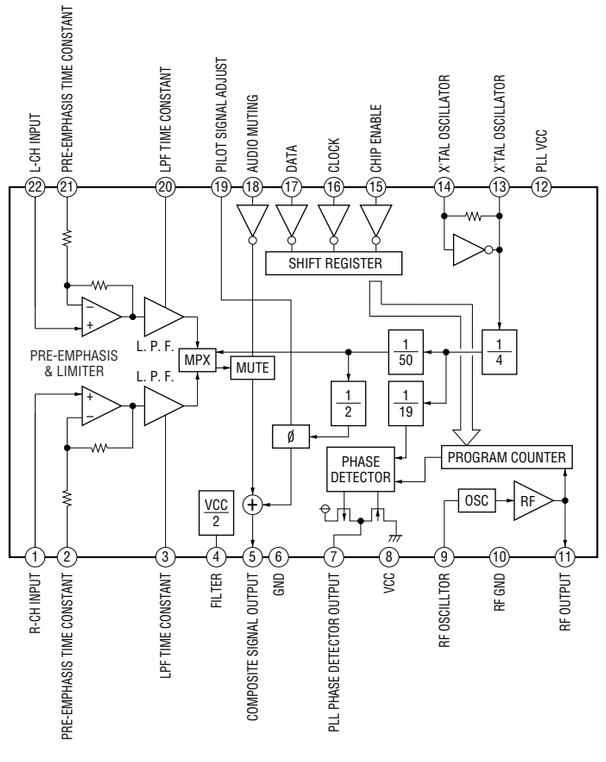
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B + : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground in CD play mode.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY

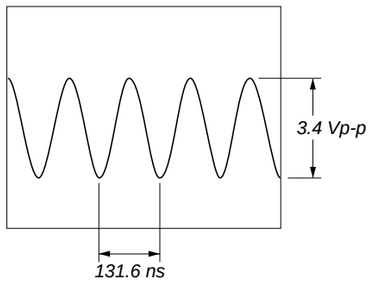
• IC Block Diagram
– FM Board –

IC701 BH1415F-E2

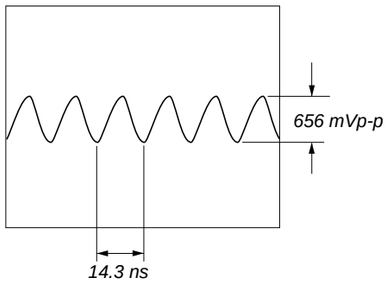


• Waveforms
– FM Board –

❶ IC701 ⑬ (XOUT)



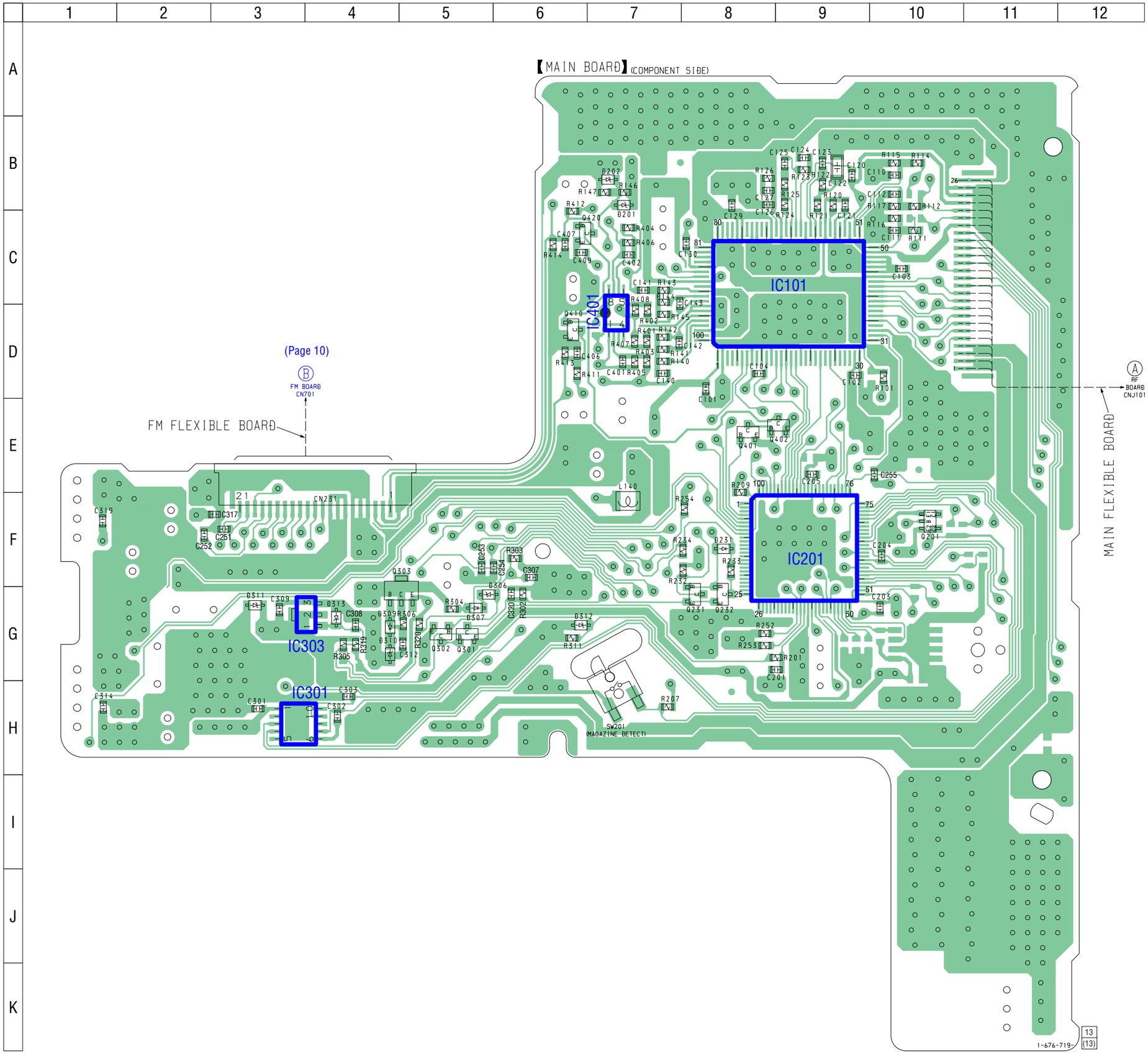
❷ IC701 ⑪ (RF OUT)



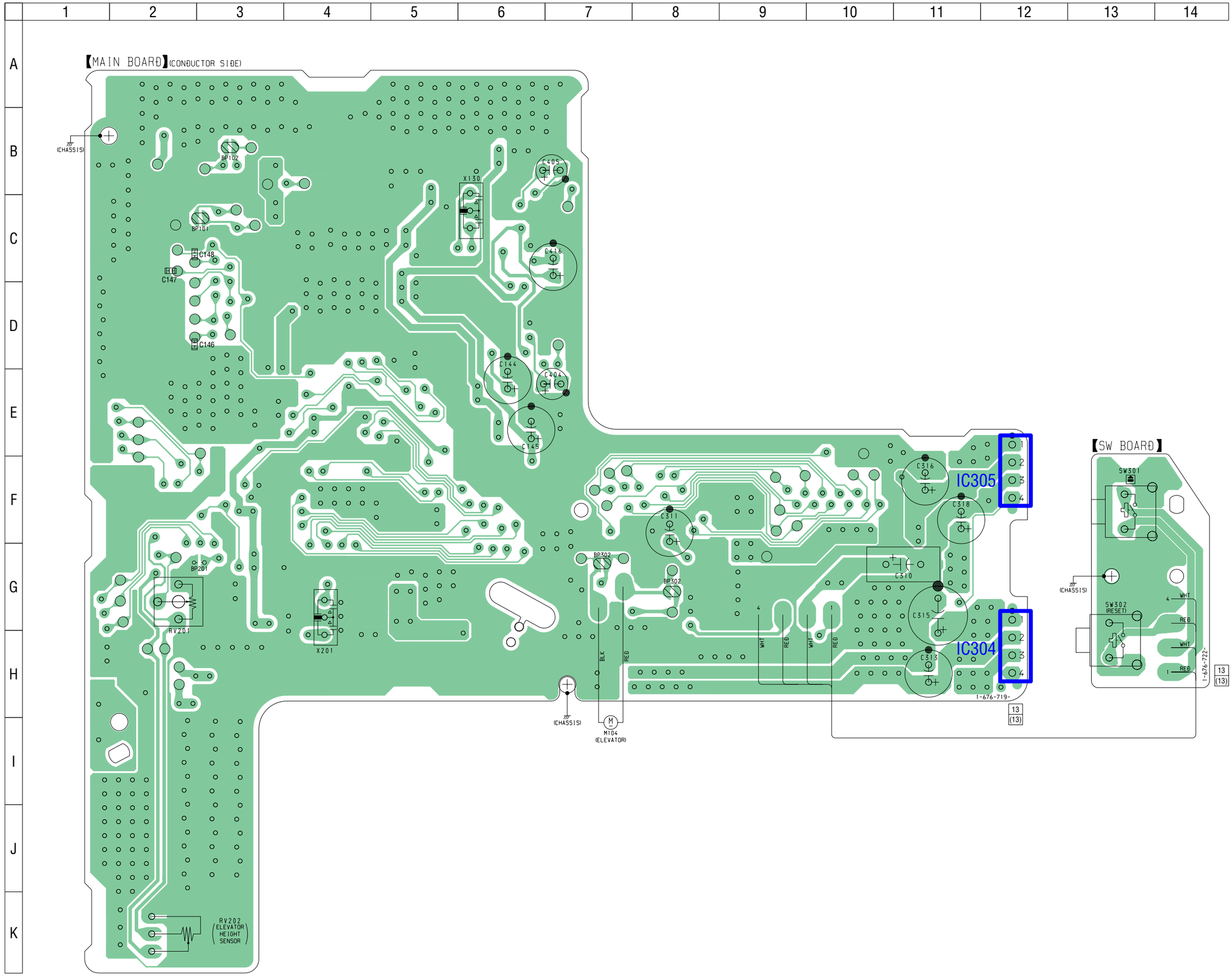
2-4. PRINTED WIRING BOARD – MAIN Board (Component Side) –

- **Semiconductor Location**

Ref. No.	Location
D201	B-7
D202	B-7
D231	F-8
D306	G-5
D307	G-5
D309	G-4
D310	G-4
D311	G-3
D312	G-6
D313	G-4
IC101	C-9
IC201	F-9
IC301	H-3
IC303	G-4
IC401	D-7
Q201	F-10
Q231	G-8
Q232	G-8
Q301	G-5
Q302	G-5
Q303	G-5
Q401	E-8
Q402	E-9
Q410	D-6
Q420	C-6



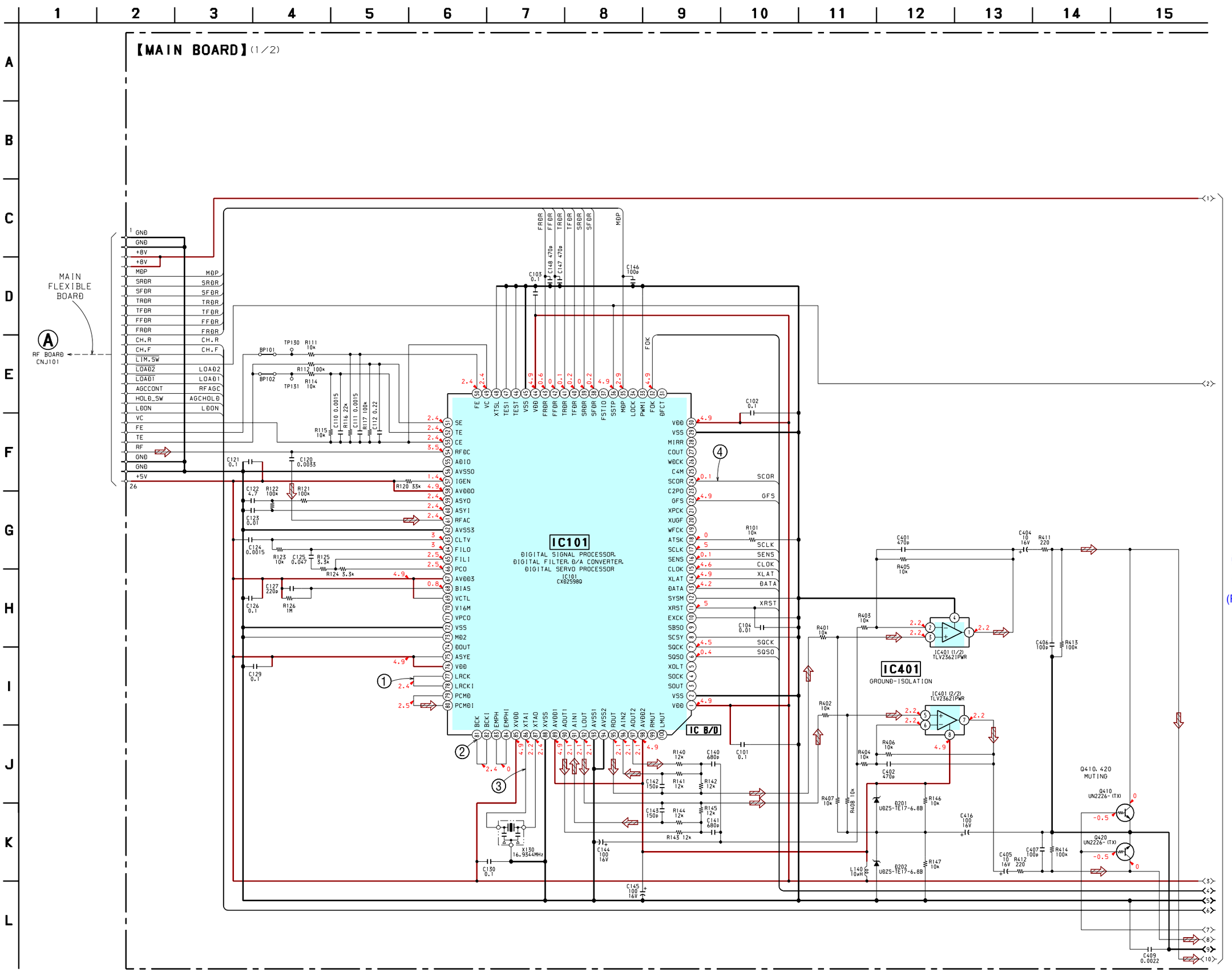
2-5. PRINTED WIRING BOARDS – MAIN (Conductor Side)/SW Boards –



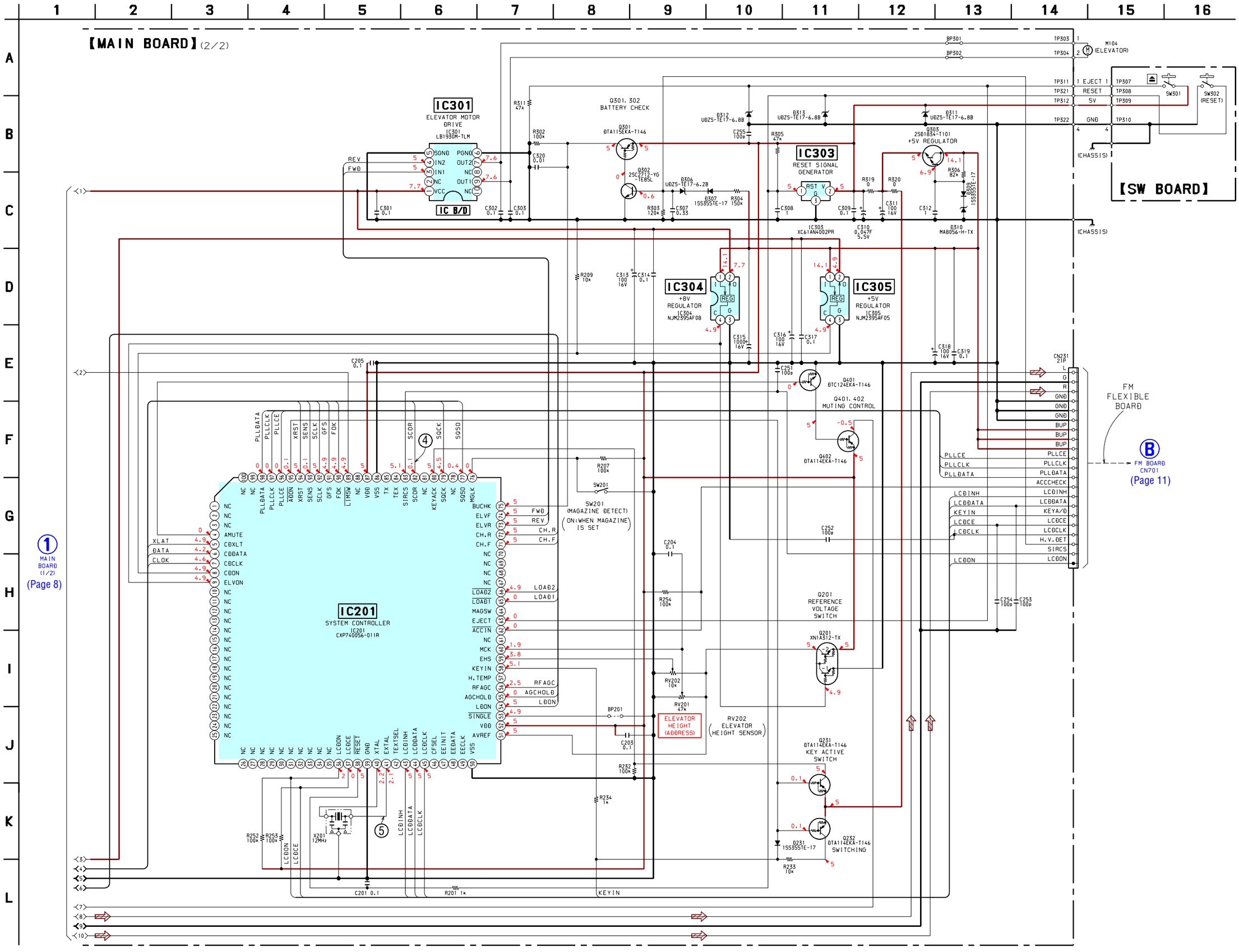
- **Semiconductor Location**

Ref. No.	Location
IC304	H-12
IC305	F-12

2-6. SCHEMATIC DIAGRAM – MAIN Board (1/2) –



2-7. SCHEMATIC DIAGRAM – MAIN (2/2)/SW Boards –

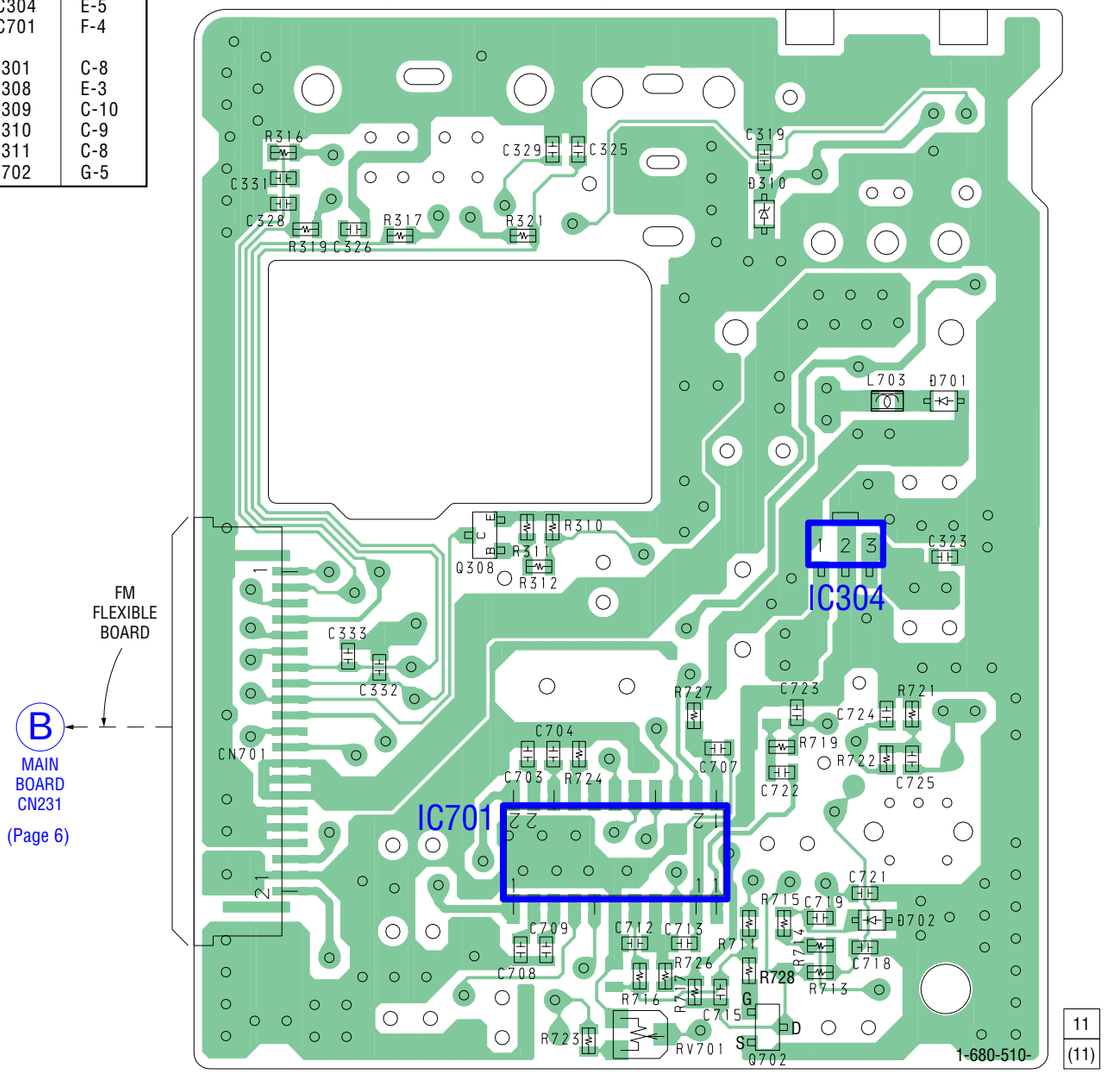


2-8. PRINTED WIRING BOARD – FM Board –

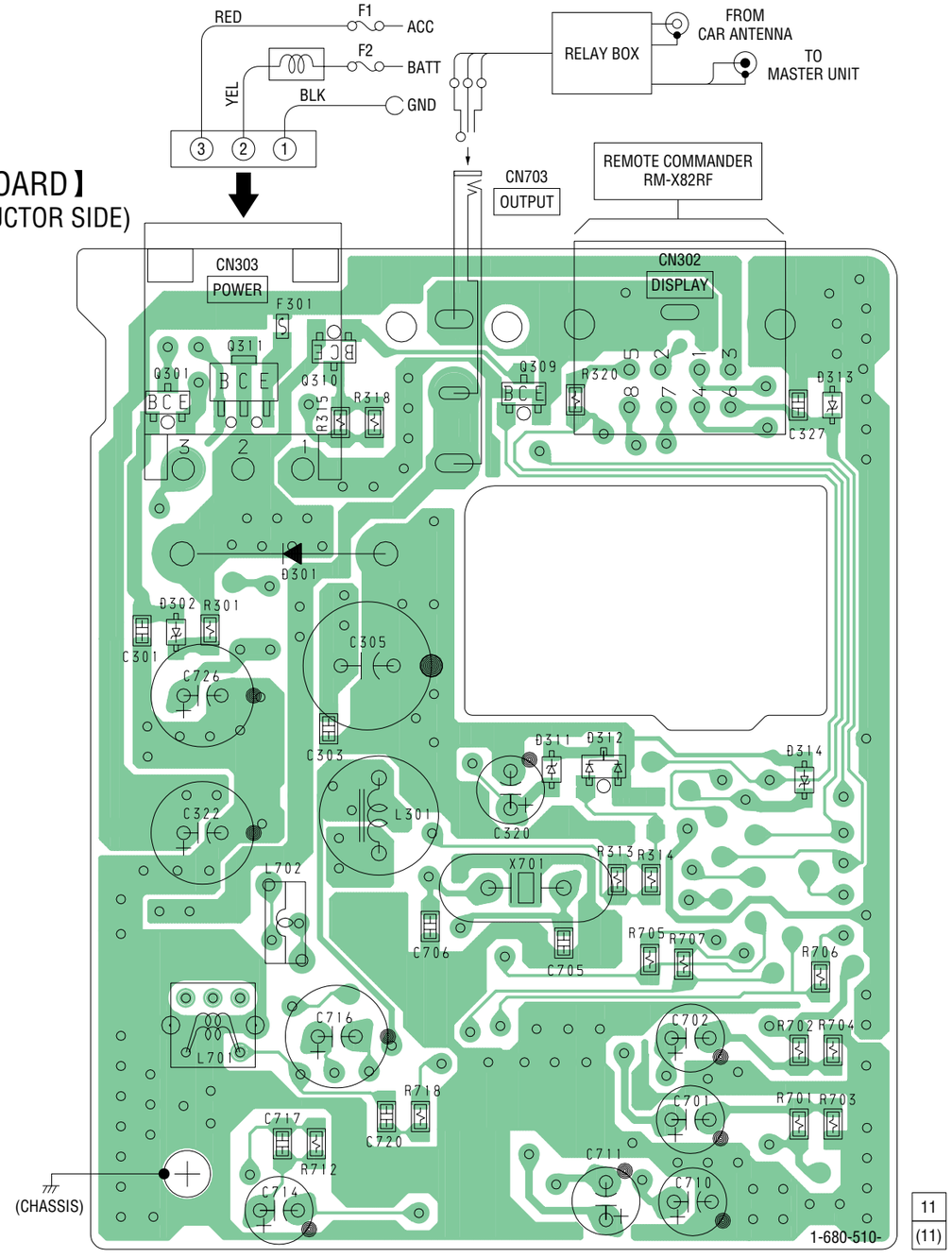
- **Semiconductor Location**

Ref. No.	Location
D301	D-9
D302	D-8
D310	C-5
D311	E-10
D312	E-10
D313	C-11
D314	E-11
D701	D-6
D702	G-5
IC304	E-5
IC701	F-4
Q301	C-8
Q308	E-3
Q309	C-10
Q310	C-9
Q311	C-8
Q702	G-5

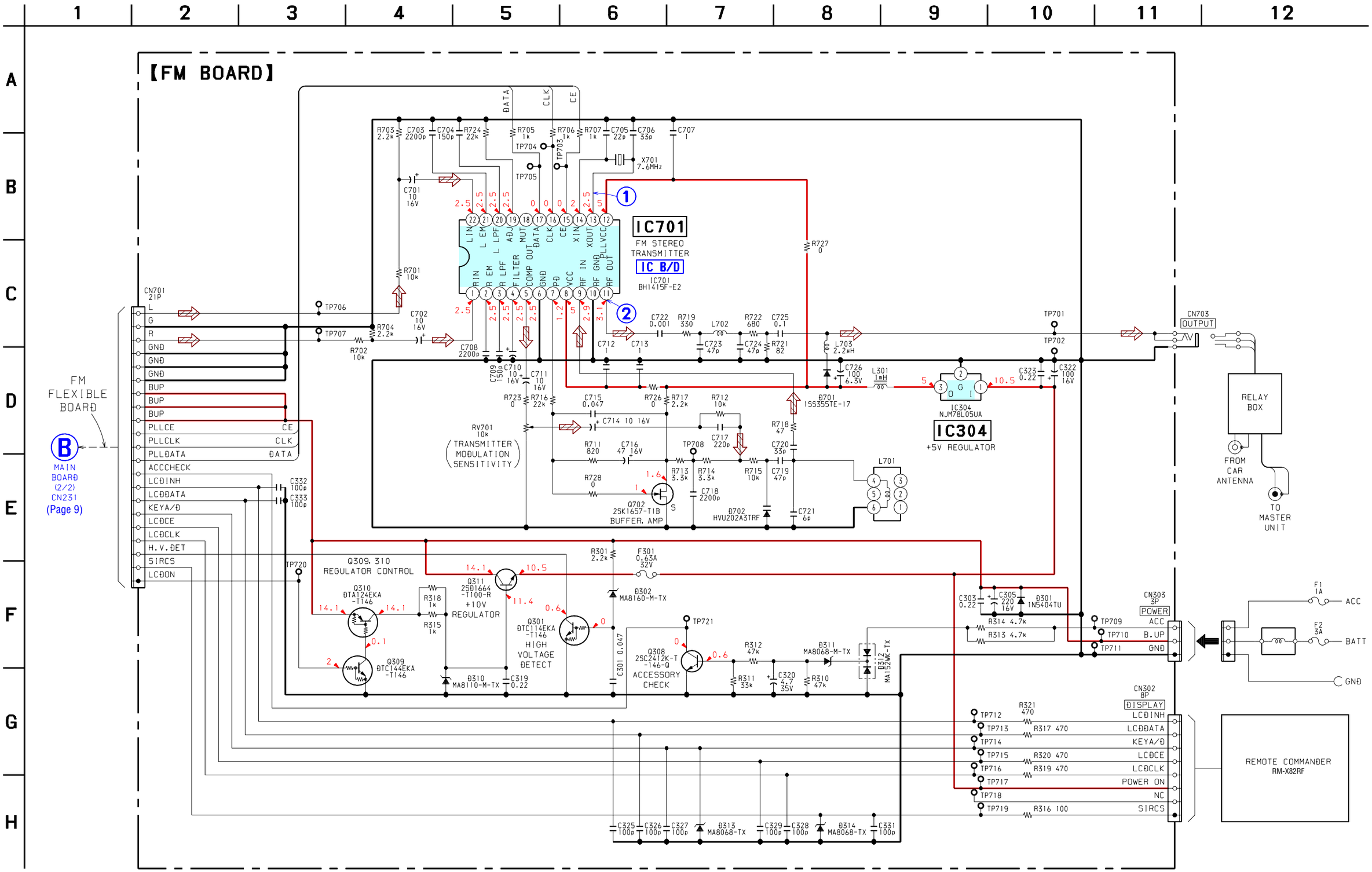
【FM BOARD】(COMPONENT SIDE)



【FM BOARD】(CONDUCTOR SIDE)



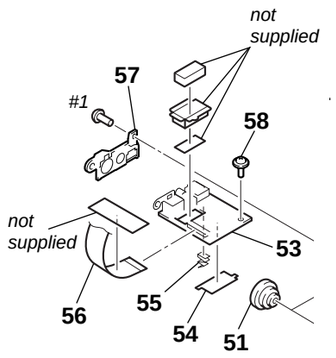
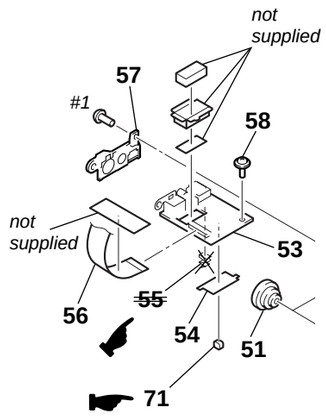
2-9. SCHEMATIC DIAGRAM – FM Board – • See page 5 for Waveforms. • See page 5 for IC Block Diagram.



3. EXPLODED VIEW

DIFFERENCE PARTS LIST

☛ : Indicates changed portion.

Page	Former Type	New Type
38		

Ref. No.	Part No.	Description	Remark
53	A-3326-027-A	FM BOARD, COMPLETE	
55	3-225-783-01	SPRING (GROUND)	

Ref. No.	Part No.	Description	Remark
53	A-3340-189-A	FM BOARD, COMPLETE	
71	3-240-372-01	CUSHION (EMC)	

4. ELECTRICAL PARTS LIST

FM

When indicating parts by reference number, please include the board.

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

Ref. No.	Part No.	Description			Remark
	A-3340-189-A	FM BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C303	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C305	1-128-499-11	ELECT	220uF	20%	16V
C319	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C320	1-115-866-11	ELECT	4.7uF	20%	35V
C322	1-125-972-11	ELECT	100uF	20%	16V
C323	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C325	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C326	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C327	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C328	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C329	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C331	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C332	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C333	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C701	1-124-233-11	ELECT	10uF	20%	16V
C702	1-124-233-11	ELECT	10uF	20%	16V
C703	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C704	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C705	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C706	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C707	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C708	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C709	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C710	1-124-233-11	ELECT	10uF	20%	16V
C711	1-124-233-11	ELECT	10uF	20%	16V
C712	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C713	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C714	1-124-233-11	ELECT	10uF	20%	16V
C715	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C716	1-126-786-11	ELECT	47uF	20%	16V
C717	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C718	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C719	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C720	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C721	1-162-911-11	CERAMIC CHIP	6PF	0.5PF	50V
C722	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C723	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C724	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C725	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C726	1-124-584-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN302	1-794-066-11	CONNECTOR, MINIATURE DIN 8P (DISPLAY)			
CN303	1-793-286-11	PIN, CONNECTOR (PC BOARD) 3P (POWER)			
CN701	1-784-829-21	CONNECTOR, FPC 21P			
CN703	1-566-822-41	JACK (OUTPUT)			
		< DIODE >			
D301	8-719-049-38	DIODE 1N5404TU			
D302	8-719-022-90	DIODE MA8160M			
D310	8-719-423-23	DIODE MA8110-M			
D311	8-719-977-12	DIODE DTZ6.8B			
D312	8-719-801-78	DIODE 1SS184			
D313	8-719-017-58	DIODE MA8068			
D314	8-719-017-58	DIODE MA8068			
D701	8-719-988-61	DIODE 1SS355TE-17			
D702	8-719-058-78	DIODE HVU202A3TRF			
		< FUSE >			
F301	1-576-570-11	FUSE, MICRO (1608 TYPE) (0.63A/32V)			
		< IC >			
IC304	8-759-711-59	IC NJM78L05UA-TE1			
IC701	8-759-680-25	IC BH1415F-E2			
		< COIL >			
L301	1-419-545-11	CHOKE COIL	1mH		
L701	1-419-467-11	COIL, IFT			
L702	1-411-845-11	COIL, AIR-CORE			
L703	1-410-997-42	INDUCTOR	2.2uH		
		< TRANSISTOR >			
Q301	8-729-900-53	TRANSISTOR	DTC114EK		
Q308	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q309	8-729-027-59	TRANSISTOR	DTC144EKA-T146		
Q310	8-729-027-31	TRANSISTOR	DTA124EKA-T146		
Q311	8-729-106-68	TRANSISTOR	2SD1615A-GP		
Q702	8-729-021-94	FET	2SK1657-T1B		
		< RESISTOR >			
R301	1-216-825-11	METAL CHIP	2.2K	5%	1/16W

FM MAIN

Ref. No.	Part No.	Description			Remark
R310	1-216-841-11	METAL CHIP	47K	5%	1/16W
R311	1-216-839-11	METAL CHIP	33K	5%	1/16W
R312	1-216-841-11	METAL CHIP	47K	5%	1/16W
R313	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R314	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R315	1-216-821-11	METAL CHIP	1K	5%	1/16W
R316	1-216-809-11	METAL CHIP	100	5%	1/16W
R317	1-216-817-11	METAL CHIP	470	5%	1/16W
R318	1-216-821-11	METAL CHIP	1K	5%	1/16W
R319	1-216-817-11	METAL CHIP	470	5%	1/16W
R320	1-216-817-11	METAL CHIP	470	5%	1/16W
R321	1-216-817-11	METAL CHIP	470	5%	1/16W
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R702	1-216-833-11	METAL CHIP	10K	5%	1/16W
R703	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R704	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R705	1-216-821-11	METAL CHIP	1K	5%	1/16W
R706	1-216-821-11	METAL CHIP	1K	5%	1/16W
R707	1-216-821-11	METAL CHIP	1K	5%	1/16W
R711	1-216-820-11	METAL CHIP	820	5%	1/16W
R712	1-216-833-11	METAL CHIP	10K	5%	1/16W
R713	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R714	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R715	1-216-833-11	METAL CHIP	10K	5%	1/16W
R716	1-216-837-11	METAL CHIP	22K	5%	1/16W
R717	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R718	1-216-805-11	METAL CHIP	47	5%	1/16W
R719	1-216-815-11	METAL CHIP	330	5%	1/16W
R721	1-216-808-11	METAL CHIP	82	5%	1/16W
R722	1-216-819-11	METAL CHIP	680	5%	1/16W
R723	1-216-864-11	METAL CHIP	0	5%	1/16W
R724	1-216-837-11	METAL CHIP	22K	5%	1/16W
R726	1-216-864-11	METAL CHIP	0	5%	1/16W
R727	1-216-864-11	METAL CHIP	0	5%	1/16W
R728	1-216-295-11	SHORT	0		
		< VARIABLE RESISTOR >			
RV701	1-238-090-11	RES, ADJ, CERMET		10K	
		< VIBRATOR >			
X701	1-795-149-11	VIBRATOR, CRYSTAL (7.6MHz)			
**********					
*	A-3283-115-A	MAIN BOARD, COMPLETE			
		**********			
	1-676-339-12	MAIN FLEXIBLE BOARD			
*	3-046-988-02	PLATE (MAIN), SHIELD			
		< CAPACITOR >			
C101	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C111	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C112	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C120	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C121	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C122	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C125	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C126	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C129	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C130	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C140	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C141	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C142	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C143	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C144	1-126-382-11	ELECT	100uF	20%	16V
C145	1-126-382-11	ELECT	100uF	20%	16V
C146	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C147	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C148	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C201	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C203	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C252	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C253	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C254	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C255	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-128-934-11	CERAMIC CHIP	0.33uF	20%	10V
C308	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-110-645-11	DOUBLE LAYER	0.047F		5.5V
C311	1-126-382-11	ELECT	100uF	20%	16V
C312	1-115-156-11	CERAMIC CHIP	1uF		10V
C313	1-126-382-11	ELECT	100uF	20%	16V
C314	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C315	1-115-466-00	ELECT	1000uF	20%	16V
C316	1-126-382-11	ELECT	100uF	20%	16V
C317	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C318	1-126-382-11	ELECT	100uF	20%	16V
C319	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C402	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C404	1-124-233-11	ELECT	10uF	20%	16V
C405	1-124-233-11	ELECT	10uF	20%	16V
C406	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C407	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C409	1-162-966-11	CERAMIC CHIP	0.0022uF	20%	16V
C416	1-126-382-11	ELECT	100uF	20%	16V
		< CONNECTOR >			
CN231	1-784-829-21	CONNECTOR, FPC 21P			

MAIN

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D201	8-719-978-33	DIODE DTZ-TT11-6.8B			
D202	8-719-978-33	DIODE DTZ-TT11-6.8B			
D231	8-719-988-61	DIODE 1SS355TE-17			
D306	8-719-069-56	DIODE UDZSTE-176.2B			
D307	8-719-988-61	DIODE 1SS355TE-17			
D309	8-719-988-61	DIODE 1SS355TE-17			
D310	8-719-977-03	DIODE DTZ5.6B			
D311	8-719-978-33	DIODE DTZ-TT11-6.8B			
D312	8-719-978-33	DIODE DTZ-TT11-6.8B			
D313	8-719-978-33	DIODE DTZ-TT11-6.8B			
		< IC >			
IC101	8-752-392-04	IC CXD2598Q			
IC201	8-752-925-81	IC CXP740056-011R			
IC301	8-759-527-33	IC LB1930M-TLM			
IC303	8-759-363-81	IC XC61AN4002PR			
IC304	8-759-833-13	IC NJM2395AF08			
IC305	8-759-833-12	IC NJM2395AF05			
IC401	8-759-662-11	IC TLV2362IPWR			
		< COIL >			
L140	1-412-058-11	INDUCTOR CHIP 10uH			
		< TRANSISTOR >			
Q201	8-729-020-67	TRANSISTOR XN1A312-TX			
Q231	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q232	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q301	8-729-028-62	TRANSISTOR DTA115EKA-T146			
Q302	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q303	8-729-921-12	TRANSISTOR 2SD1834			
Q401	8-729-901-00	TRANSISTOR DTC124EK			
Q402	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q410	8-729-015-39	TRANSISTOR DTC323TK			
Q420	8-729-015-39	TRANSISTOR DTC323TK			
		< RESISTOR >			
R101	1-216-833-11	METAL CHIP	10K	5%	1/16W
R111	1-216-833-11	METAL CHIP	10K	5%	1/16W
R112	1-216-845-11	METAL CHIP	100K	5%	1/16W
R114	1-216-833-11	METAL CHIP	10K	5%	1/16W
R115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-216-837-11	METAL CHIP	22K	5%	1/16W
R117	1-216-845-11	METAL CHIP	100K	5%	1/16W
R120	1-216-839-11	METAL CHIP	33K	5%	1/16W
R121	1-216-845-11	METAL CHIP	100K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-833-11	METAL CHIP	10K	5%	1/16W
R124	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R125	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R126	1-216-857-11	METAL CHIP	1M	5%	1/16W
R140	1-216-834-11	METAL CHIP	12K	5%	1/16W
R141	1-216-834-11	METAL CHIP	12K	5%	1/16W
R142	1-216-834-11	METAL CHIP	12K	5%	1/16W
R143	1-216-834-11	METAL CHIP	12K	5%	1/16W
R144	1-216-834-11	METAL CHIP	12K	5%	1/16W
R145	1-216-834-11	METAL CHIP	12K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R146	1-216-833-11	METAL CHIP	10K	5%	1/16W
R147	1-216-833-11	METAL CHIP	10K	5%	1/16W
R201	1-216-821-11	METAL CHIP	1K	5%	1/16W
R207	1-216-845-11	METAL CHIP	100K	5%	1/16W
R209	1-216-833-11	METAL CHIP	10K	5%	1/16W
R232	1-216-845-11	METAL CHIP	100K	5%	1/16W
R233	1-216-833-11	METAL CHIP	10K	5%	1/16W
R234	1-216-821-11	METAL CHIP	1K	5%	1/16W
R252	1-216-845-11	METAL CHIP	100K	5%	1/16W
R253	1-216-845-11	METAL CHIP	100K	5%	1/16W
R254	1-216-845-11	METAL CHIP	100K	5%	1/16W
R302	1-216-845-11	METAL CHIP	100K	5%	1/16W
R303	1-216-846-11	METAL CHIP	120K	5%	1/16W
R304	1-216-847-11	METAL CHIP	150K	5%	1/16W
R305	1-216-841-11	METAL CHIP	47K	5%	1/16W
R306	1-216-844-11	METAL CHIP	82K	5%	1/16W
R311	1-216-841-11	METAL CHIP	47K	5%	1/16W
R319	1-216-864-11	METAL CHIP	0	5%	1/16W
R320	1-216-864-11	METAL CHIP	0	5%	1/16W
R401	1-216-833-11	METAL CHIP	10K	5%	1/16W
R402	1-216-833-11	METAL CHIP	10K	5%	1/16W
R403	1-216-833-11	METAL CHIP	10K	5%	1/16W
R404	1-216-833-11	METAL CHIP	10K	5%	1/16W
R405	1-216-833-11	METAL CHIP	10K	5%	1/16W
R406	1-216-833-11	METAL CHIP	10K	5%	1/16W
R407	1-216-833-11	METAL CHIP	10K	5%	1/16W
R408	1-216-833-11	METAL CHIP	10K	5%	1/16W
R411	1-216-813-11	METAL CHIP	220	5%	1/16W
R412	1-216-813-11	METAL CHIP	220	5%	1/16W
R413	1-216-845-11	METAL CHIP	100K	5%	1/16W
R414	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< VARIABLE RESISTOR >			
RV201	1-223-834-11	RES, ADJ, CARBON 47K			
		< SWITCH >			
SW201	1-529-565-41	SWITCH, PUSH (1 KEY) (MAGAZINE DETECT)			
		< VIBRATOR >			
X130	1-760-307-11	VIBRATOR, CERAMIC (16.9344MHz)			
X201	1-579-126-11	VIBRATOR, CERAMIC (12MHz)			

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2000.12	New
1.1	2001.06	Change of MAIN/SW boards (SUFFIX-13) (ECN-CSA03709)
1.2	2001.09	Change of Part No. for Ref No.2 FRONT PANEL (T) (SPM-01019)
1.3	2002.03	Addition of Notes on CD-R Discs, Test Disc, Jig on Repairing Change of FM board (ECN-CSA04972)